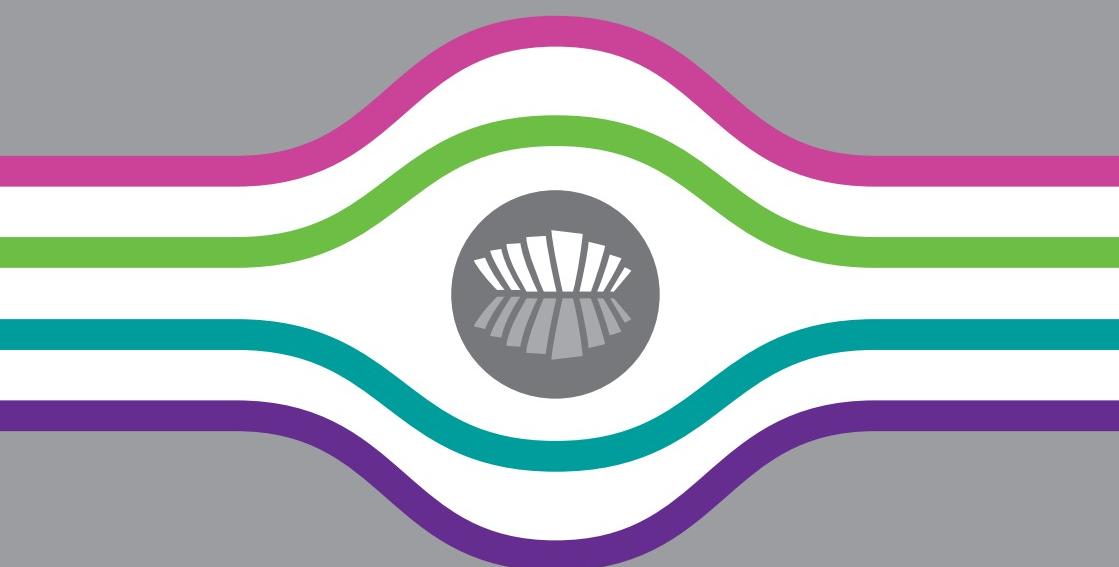




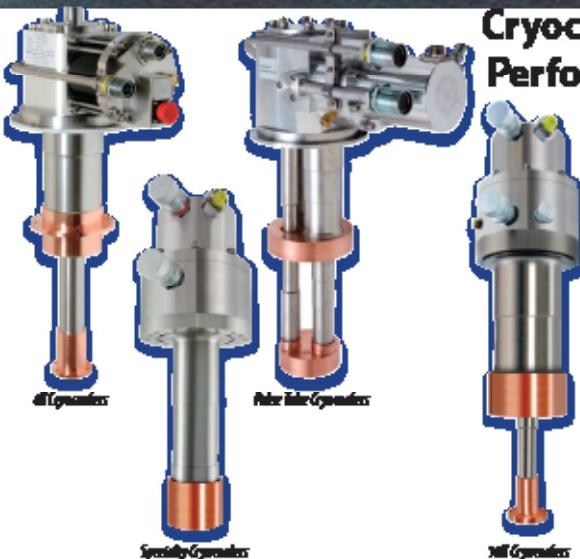
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# WELCOME

On behalf of the entire UK Superconductivity community we are delighted to be able to welcome colleagues from Europe and around the world to the 14<sup>th</sup> European Conference on Applied Superconductivity in Glasgow, Scotland. The cross-fertilisation of ideas from open discussion is a bedrock of scientific progress which, at a time when some are looking in on themselves and are distrustful of collaboration, we are committed to facilitating during this week.

A key aspect of EUCAS 2019 is that, while presentations are streamed into Materials, Electronics and Large-Scale, there is plenty of opportunity for attendees to look outside their own speciality for new opportunities. In this context we would particularly encourage attendance at our special sessions which address important topics for the whole applied superconductivity community.

The International Scientific Programme Committee, led by Profs. Damian Hampshire, Susie Speller, Yifeng Yang and Paul Warburton, has drawn together a diverse, engaging and high-quality programme of talks and posters. We are, in particular, very pleased to be able to welcome our Keynote and Plenary speakers who will set out the wider context in which we are working.

We are particularly grateful to our sponsors: Sumitomo Cryogenics, BlueFors, Oxford Instruments, Out of the Fog Research, Janis, Kiswire and Shanghai Superconductor. Their support of this endeavour underlines the strong connection and productive collaboration between universities, research institutes and industry that drives the applied superconductor community ever forward.

As at previous EUCAS conferences, all presenters will be invited to publish a manuscript in the Journal of Physics

Conference Series so as to provide a lasting record of the meeting. Keynote, Plenary, invited speakers and select contributors recommended by session chairs will be invited to submit a manuscript for publication in an associated special issue of Superconductor Science and Technology. We are grateful for the enthusiastic engagement of Institute of Physics Publishing with the EUCAS conference.

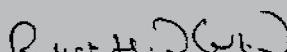
Glasgow is a vibrant city with a rich history and culture, which we encourage you to explore. We hope the civic welcome reception, exhibitor whisky tasting and reception and our conference dinner and ceilidh will be just an initial introduction to Glasgow hospitality. Our public evening lecture will also provide an introduction to the distinctive contribution that Scots and Scotland have made to the development of science and engineering. Beyond Glasgow lies Scotland, a beautiful country with a fascinating history and stunning landscapes which those with more time will be able to fully appreciate.

We are grateful to the Lord Provost, Glasgow City Council and the Glasgow Convention Bureau for their welcome and support of this meeting. Finally, we would like to express our appreciation to the European Society for Applied Superconductivity, the sponsoring body for the EUCAS conference and to our professional conference organisers, SAS Event Management, without whom we would not have been able to deliver what we are sure will be a memorable week.



**John Durrell**

University of Cambridge



**Robert Hadfield**

University of Glasgow

# CONFERENCE APP

Download the EUCAS 2019 conference app for free from the Google Play Store (android) or App Store (IOS).

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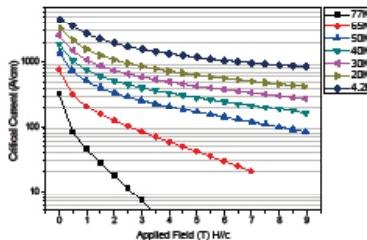


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# SUPPORTING ORGANISATIONS



The European Society for Applied Superconductivity was founded on September 4, 1998 in Frankfurt, Germany. ESAS brings together scientists and engineers working in applied superconductivity across both industry and academia in Europe. The Society most notably assigns and monitors the organization of EUCAS but is also involved in a growing range of other activities aiming at promoting the field of applied superconductivity.

## **Its goals are:**

- to strengthen the position of Applied Superconductivity, especially in Europe
- to represent Applied Superconductivity in social, scientific, educational, industrial and political forums
- to promote communication in the area of Applied Superconductivity.

## **To achieve its objectives, among other things, ESAS is:**

- supporting the organization of conferences, such as the European Conference on Applied Superconductivity EUCAS
- supporting the organization of workshops and schools in the area of Applied Superconductivity
- supporting European research proposals and projects in the area of Applied Superconductivity
- Supporting the participation of young scientists in workshops and conferences in the area of Applied Superconductivity

ESAS is a not for profit organisation. Membership is open for everybody active in the field of Applied Superconductivity. For more information on how to become member, please refer to the membership section of [www.esas.org](http://www.esas.org).

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The Group has multiple locations to serve its customers, in addition to a worldwide network of sales and service representatives that strengthen the company's position as a cryogenic leader. With offices in Asia, Europe and the United States, it has been producing quality cryogenic equipment for over 50 years. SHI's renowned engineering departments continue to focus on the latest cryogenic technologies, including innovative cryocooler designs for superconducting applications. SHI has taken the lead on innovation by designing and manufacturing cryocoolers to cover a variety of applications, including:

- 4K Cryocoolers for helium liquefiers, superconducting magnets and single-photon detectors
- Pulse Tube Cryocoolers for ultra-low temperature systems, SQUIDs and low-vibration applications
- Specialty and Single-Stage Cryocoolers for high temperature superconductivity, liquid nitrogen generators and wind turbines
- In addition, SHI designs and manufactures 10K Cryocoolers, Helium Compressors and Cryopumps.

Sumitomo (SHI) Cryogenics of Europe Limited ("SCEL"), along with Sumitomo (SHI) Cryogenics of Europe GmbH ("SCEG"), are the European wholly owned subsidiaries of the SHI Cryogenics Group.

[www.shicryogenics.com](http://www.shicryogenics.com)

**GOLD**



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We offer a variety of base models and to further meet the specific needs of each customer these can be equipped with a wide range of options. For example, experimental wiring, optical access and magnet integration.

Our systems can be customized to meet the special requirements of each experiment and we strive for a transparent company structure allowing the customer to get in direct contact with the scientists and engineers that design their system.

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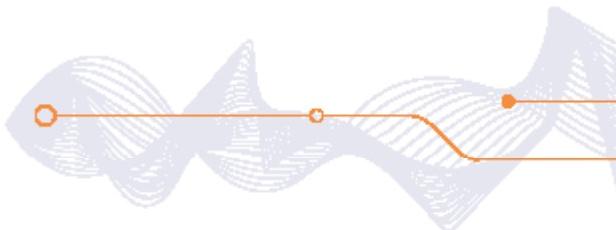


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# EXHIBITOR FLOOR PLAN



# LIST OF EXHIBITORS

<b>Advanced Conductor Technologies LLC</b>	<b>24</b>
<b>AFCryo/HTS-110/Robinson Research</b>	<b>50</b>
<b>AMSC</b>	<b>3</b>
<b>ASG Superconductors</b>	<b>26</b>
<b>Bluefors</b>	<b>29</b>
<b>Bruker EST</b>	<b>12</b>
<b>CAN SUPERCONDUCTORS</b>	<b>22</b>
<b>CryoCoax (division of Intelliconnect)</b>	<b>37</b>
<b>Cryogenic Ltd</b>	<b>14</b>
<b>Cryomech, Inc.</b>	<b>54</b>
<b>Delft Circuits</b>	<b>17</b>
<b>EUCAS 2021</b>	<b>2</b>
<b>Fujikura Ltd</b>	<b>10</b>
<b>ICE Oxford/Scientific Instruments</b>	<b>35</b>
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<b>Oxford Instruments NanoScience</b>	<b>47</b>
<b>Quantum Design UK and Ireland Ltd</b>	<b>23</b>
<b>SAES Getters S.p.A.</b>	<b>41</b>
<b>Shanghai Creative Superconductor Technologies Co., Ltd</b>	<b>30</b>
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<b>WEKA AG</b>	<b>56</b>
<b>Western Superconducting Technologies Co.,Ltd</b>	<b>53</b>
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We offer a variety of base models and to further meet the specific needs of each customer these can be equipped with a wide range of options. For example, experimental wiring, optical access and magnet integration.

Our systems can be customized to meet the special requirements of each experiment and we strive for a transparent company structure allowing the customer to get in direct contact with the scientists and engineers that design their system.

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[www.bruker.com/best](http://www.bruker.com/best)

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**Stand # 17**  
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[www.fujikura.com](http://www.fujikura.com)

**Fujikura Ltd.**

Fujikura is the global leader of developing rare-earth-based 2nd Generation High-Temperature Superconductor. We sustain this title by producing best performance and stable quality superconductors with long piece, high critical current and its longitudinal uniformity. Prospective applications of our superconductors are now widely spread in various industrial applications.

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**Stand # 35**  
[www.iceoxford.com](http://www.iceoxford.com)

**ICE Oxford Ltd**

ICEoxford manufacture cryogenic systems with magnetic fields for the global scientific community. With 150+ years of cryogenic experience to call on, ICEoxford is superbly positioned to supply bespoke systems suited to the particular needs of specific applications. Specialised in both wet and dry systems as well as repairs and service.

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**Stand # 16**  
[ioppublishing.org](http://ioppublishing.org)

**IOP Publishing**

IOP Publishing is a society-owned scientific publisher, providing impact, recognition and value for the scientific community. Wholly owned by the UK Institute of Physics, we work closely with researchers, academics, and partners worldwide to produce academic journals, ebooks, conference series, and digital products, covering the latest and best research in the physical sciences and beyond.

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**Stand # 19**  
[www.janis.com](http://www.janis.com)

**Janis Research Company, LLC**

Janis Research offers a complete line of cryogenic equipment, including 4.2K cryogen free systems, variable temperature cryostats (1.5K – 800K), micro-manipulated probe systems (3K – 650K) & ultra-low temperature systems (10mK – 300mK). We also offer systems for UHV environments (STM, AFM, SNOM, etc.), vector rotation and optical superconducting magnets and ultra-low loss cryostats.

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**Stand # 20**  
[www.kiswire.com](http://www.kiswire.com)

**Kiswire Advanced Technology Ltd.**

Kiswire Advanced Technology Ltd. (KAT) is a sole superconducting wire manufacturer in Korea.

We are making a constant effort to become the best company in the superconducting business field.

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**Stand # 13**  
[www.lakeshore.com](http://www.lakeshore.com)

**Lake Shore Cryotronics, Inc.**

Lake Shore Cryotronics is a leading provider of measurement solutions over a wide range of temperature and magnetic field conditions. High-performance products include cryogenic temperature sensors for monitoring superconducting magnet temperatures and sensor input modules offering a precise, convenient way to remotely monitor sensors in particle accelerators or other large-scale experiments.

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### **Stand # 5**

[www.mayekawa.com](http://www.mayekawa.com)

#### **Mayekawa Mfg. Co.,Ltd.**



Mayekawa Manufacturing Company has expanded its business by focusing on freezing and compression technologies ever since its establishment in 1924.

Mayekawa would like to introduce our new cryogenic refrigerator and cooling system to you which will be useful for the cooling of superconducting material.

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### **Stand # 1**

[www.metrolab.com](http://www.metrolab.com)

#### **Metrolab**

Metrolab is the global market leader for precision magnetometers, used to measure strong magnetic fields with great precision.



#### **Customers:**

- MRI and magnet manufacturers
- Accelerator and calibration labs
- OEM customers

#### **Products:**

- NMR Precision Teslameters
  - NMR Magnetic Field Cameras
  - Precision Digital Integrators
  - 3-axis Hall Magnetometers
- 

### **Stand # 47**

[nanoscience.oxinst.com](http://nanoscience.oxinst.com)

#### **Oxford Instruments NanoScience**



Oxford Instruments NanoScience designs, supplies and supports market-leading research tools that enable quantum technologies, new materials and device development in the physical sciences. Our tools support research down to the atomic scale through creation of high performance, cryogen free low temperature and magnetic environments, based upon our core technologies in low and ultra-low temperatures, high magnetic fields and system integration.

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**Stand # 23**

[www.qd-uki.co.uk](http://www.qd-uki.co.uk)

**Quantum Design UK and Ireland Ltd**

Visit Stand 23 at EUCAS 2019 to discuss our range of Physical Property Measurement Systems, Magnetometers, Magneto-Optical Cryostats from Quantum Design and Optical Cryostats from Montana Instruments.

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**Stand # 41**

[www.saesgroup.com](http://www.saesgroup.com)

**SAES Getters S.p.A.**

SAES Getters Group is the world leader in a variety of scientific and industrial applications where very stringent vacuum conditions are required. Bringing a wealth of experience in special metallurgy and material science to the needs of the advanced material industry is our new challenge for the 21st century.

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**Stand # 35**

[www.scientificinstruments.com](http://www.scientificinstruments.com)

**Scientific Instruments Inc.**

Scientific Instruments Inc. is a leading manufacturer of measurement solutions for cryogenic applications. From temperature sensors, instrumentation, and aerospace transducers, to LNG tank gauging systems and spectroscopic analyzers for in situ LNG composition/BTU reporting, Scientific Instruments, Inc. offers a wide array of high accuracy, high precision solutions to suit your measurement needs. The company has maintained ISO9001 certification since 1997 and manufactures products to national and international certifications and standards including, but not limited to, FAA-PMA, ATEX, CSA, UL, and IECEx.

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**Stand # 30**

[www.china-superconductor.com](http://www.china-superconductor.com)

**Shanghai Creative Superconductor Technologies Co., Ltd**

Shanghai Creative Superconductor Technologies Co. Ltd (SCSC) was jointly established in August 2011 under the direction of Shanghai Science & Technology Commission. In cooperation with investors, the ownership structure of SCSC changed to mixed ownership enterprise which funding by investors, Shanghai University, Shanghai Venture Capital Co. Ltd.(SHVC), Shanghai BaiCun Industrial Co. Ltd. and the technical team. SCSC is a high-tech company focusing on R&D and manufacture of the second-generation high temperature superconducting (2G HTS) material and the downstream application components with industry-university-research cooperation.

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**Stand # 21**

[www.shsctec.com](http://www.shsctec.com)

**Shanghai Superconductor Technology**

Shanghai Superconductor Technology Co., Ltd. (SST) employs physical vapour deposition techniques for the mass production of cost-effective 2G-HTS conductors with superior mechanical properties and high critical current densities for all types of applications. We also provide associated products and services including magnets, coil winding machines, cryocoolers and vacuum deposition systems.

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**Stand # 38**

[www.starcryo.com](http://www.starcryo.com)

**STAR Cryoelectronics LLC**

STAR Cryoelectronics offers advanced LTS and HTS dc SQUID sensors, high-performance PC-based SQUID readout electronics (pcSQUID™), the popular Mr. SQUID® Educational Demonstration System, custom LTS and HTS thin-film fabrication services, custom cryocables, cryogen-free ADR cryostats, TES microcalorimeter and STJ detectors, and turn-key spectrometers for X-ray microanalysis and synchrotron beamlines.

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**KISWIRE ADVANCED TECHNOLOGY (KAT)**  
[www.kiswire.com](http://www.kiswire.com)

**INNOVATIVE POWERFUL FUTURISTIC**



Kiswire Advanced Technology Ltd. (KAT) is a sole superconducting wire manufacturer in Korea. We are making a constant effort to become the best company in superconducting business field.

**SUPERCONDUCTING WIRE**

- Nb<sub>3</sub>N strand for particle accelerator magnets
- Nb<sub>3</sub>N strand for nuclear fusion (ITER, K-STAM)
- NbTi strand for MRI magnet
- Insulation technology (PVA, Glass star braid, Cr Plate)
- Manufacturing capacity 4 tons per month

**MAGNET**

- 1.5T whole body magnet
- 3.0T whole body magnet
- Zero-boil-off magnet
- Small magnet for cryogenic application

**CRYOMODULE**

- Cryomodule for heavy ion accelerator (HWR)
- Superconducting cavity
- High pressure helium vessel
- 2 K cryogenic system

**Stand # 44**[www.shicryogenics.com](http://www.shicryogenics.com)**Sumitomo Cryogenics of Europe Limited**

SHI Cryogenics Group, an integral part of the Precision Equipment Division of Sumitomo Heavy Industries, Ltd., is a leading worldwide provider of innovative cryogenic solutions to the medical, semiconductor, flat panel, general coating and research industries.

The Group has multiple locations to serve its customers, in addition to a worldwide network of sales and service representatives that strengthen the company's position as a cryogenic leader. With offices in Asia, Europe and the United States, it has been producing quality cryogenic equipment for over 50 years. SHI's renowned engineering departments continue to focus on the latest cryogenic technologies, including innovative cryocooler designs for superconducting applications. SHI has taken the lead on innovation by designing and manufacturing cryocoolers to cover a variety of applications, including:



- 4K Cryocoolers for helium liquefiers, superconducting magnets and single-photon detectors
- Pulse Tube Cryocoolers for ultra-low temperature systems, SQUIDs and low-vibration applications
- Specialty and Single-Stage Cryocoolers for high temperature superconductivity, liquid nitrogen generators and wind turbines
- In addition, SHI designs and manufactures 10K Cryocoolers, Helium Compressors and Cryopumps.

Sumitomo (SHI) Cryogenics of Europe Limited ("SCEL"), along with Sumitomo (SHI) Cryogenics of Europe GmbH ("SCEG"), are the European wholly owned subsidiaries of the SHI Cryogenics Group.

**Stand # 32**[global-sei.com/super](http://global-sei.com/super)**Sumitomo Electric Industries Ltd.**

DI-BSCCO is the trade mark of Sumitomo Electric Industries (SEI). Using DI-BSCCO, researchers and manufacturers from around the world have successfully manufactured superconducting cables, magnets, motors and current leads. SEI developed Type HT-NX, an extra high strength DI-BSCCO, superconductor design that is surpassing other HTS wires for high field magnet.





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**Stand # 4**

[www.i-sunam.com](http://www.i-sunam.com)

**SuNAM Co., Ltd.**

SuNAM manufactures highly energy efficient and cost effective second-generation superconducting (2G HTS) wires and high field superconducting magnets. SuNAM's 2G HTS wires show minimum  $I_c$  of 200 A per 4 mm width @ 77 K, self field. High performance superconducting cables, motors, magnets and fault current limiters can be fabricated by SuNAM's 2G HTS wire.

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**Stand # 6**

[www.supercon-wire.com](http://www.supercon-wire.com)

**Supercon, Inc.**

SUPERCON has been manufacturing low temperature NbTi and Nb<sub>3</sub>Sn superconductors as standard and specially designed wire and cable since 1962. Many of Supercon's standard conductors, from 0.025 to 2.0mm diameter, are available from stock. A wide variety of custom composite metal wires is also available. We can deliver research quantities to OEM requirements from stock.

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**Stand # 27**

[www.superox.ru](http://www.superox.ru)

**SuperOx**

SUPEROX – SUPERCONDUCTOR TO THE FUTURE OF THE NEW ELECTRIC POWER INDUSTRY ARCHITECTURE.

Due to unique electric and physical properties of high temperature superconductors, the application of 2G HTS tapes results in unique and superior qualities of power cables, fault current limiters, transformers, motors, generators, energy storage systems and magnets.

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**Stand # 43**

[www.superpower-inc.com](http://www.superpower-inc.com)

**SuperPower Inc/Furukawa Electric**

SuperPower Inc. is a developer and manufacturer of REBCO-based high temperature superconducting (HTS) wires that provide a variety of advantages over conventional electrical conductors. Established in 2000, SuperPower is a subsidiary of Furukawa Electric Co., Ltd. Our mission is to be a world-leading supplier of high-performance HTS

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**Stand # 18**[www.samri.org.cn](http://www.samri.org.cn)**Suzhou Advanced Materials Research Institute**

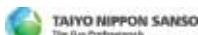
Suzhou Advanced Materials Research Institute Co.,Ltd (SAMRI) was co-established by Jiangsu Etern Group Corporation stock code 600105, SH), China-Singapore Suzhou Industrial Park Venture Capital Co., LTD., and superconducting material expertise from abroad in 2011 with an innovated cooperation mode and managing concept. As a world leading 2G HTS wire developing and manufacturing company— SAMRI, together with Etern Group's other two subsidiaries Eastern Superconducting technology (Suzhou) Co., LTD and East China Superconducting Test (Jiangsu) Co., LTD., form the only superconducting cluster of the industrial value chain in China. The superconducting industry of yongding group is based in the beautiful city - Wujiang Suzhou, covering an area of 50,000  with a total investment of nearly 500 million RMB.



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**Stand # 7**[www.tn-sanso.co.jp](http://www.tn-sanso.co.jp)**TAIYO NIPPON SANSO Corporation**

Taiyo Nippon Sanso is one of the largest industrial gas company as well as Turbo Brayton refrigerator “NeoKelvin-Turbo” manufacturer, supplying its system to cool High Temperature Superconducting applications. “NeoKelvin-Turbo” provides easy operation, installation and maintenance with its cooling capacity of 10kW for commercial scale and 2kW for demonstration scale



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**Stand # 11**[www.tesla.co.uk](http://www.tesla.co.uk)**Tesla Engineering Ltd**

Tesla Engineering Ltd. was founded 45 years ago to supply magnets for particle accelerators. Today, the Tesla group of companies has factories in the UK, the USA, and the Netherlands. The group has combined expertise in magnetics, composites, and precision manufacturing, and serves a wide range of well-known customers in national and international laboratories.





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**THEVA**

**Stand # 9**  
[www.THEVA.com](http://www.THEVA.com)

**THEVA Dünnenschichttechnik GmbH**

THEVA has invested over fifteen years in development to build Germany's first commercial 2G HTS production plant. Thanks to its very high energy density, THEVA Pro-Line superconductor can replace conventional copper cable in high-performance applications. It opens entirely new scope for the design of electrical components. Manufacturers of cables, power switches, large electric drives and power rails can rely on the high quality and performance of the material. THEVA stands for high-end solutions in coating technology and equipment engineering.

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**Stand # 56**  
[www.weka-ag.ch](http://www.weka-ag.ch)

**WEKA**®

WEKA is one of the global leaders in developing and manufacturing of instruments for liquid level measurement, cryogenic components and highly sophisticated valves with more than 40 years of experience. WEKA cryogenic components provide optimal and reliable solutions for handling low temperature liquefied gases under extreme conditions.

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**Stand # 53**  
[www.c-wst.com](http://www.c-wst.com)

 Western Superconducting  
Technologies Co.,Ltd.

**Western Superconducting Technologies Co.,Ltd**

WST was founded in China for developing large scale production of NbTi and Nb<sub>3</sub>Sn superconducting wire for ITER In 2003. Currently, WST has already built an advanced level production line of superconducting wires with annual production capacity of 350 ton superconducting wire and 400 ton WIC superconducting conductor.

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**Stand # 15**  
[www.zhinst.com](http://www.zhinst.com)

  
**Zurich  
Instruments**

**Zurich Instruments AG**

Zurich Instruments is a manufacturer of test & measurement equipment for advanced research & development applications. The instruments use LabOne® control software that sets a benchmark for efficient instrumentation control and a good user experience. This progressive approach reduces the complexity of laboratory setups, removes sources of problems and supports new measurement strategies that accelerate the progress of research. Zurich Instruments' portfolio comprises lock-in amplifiers, arbitrary waveform generators, impedance analyzers, quantum computing control systems, phase-locked loops and boxcar averagers.

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# AWARDS

Awards will be presented during EUCAS 2019 as follows:

**ESAS Award for Excellence in Applied Superconductivity:** Tuesday 3 September 2019 from 0845 in the Clyde Auditorium.

**2019 ESAS Awards for Young Researchers:** Thursday 5 September from 1145 in the Clyde Auditorium.

**The Jan Evetts SUST Award:** Wednesday 4 September 2019 from 0845 in the Clyde Auditorium.

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## ESAS AWARDS

### ESAS Award for Excellence in Applied Superconductivity

The ESAS Award for Excellence in Applied Superconductivity to recognize excellence in advancing the knowledge of applied superconductivity over the past five years is awarded to Prof Dr Yanwei Ma, Institute of Electrical Engineering, Chinese Academy of Sciences, China.

The 2019 ESAS Award for Excellence in Applied Superconductivity will be bestowed to Prof. Dr. Yanwei Ma from the Institute of Electrical Engineering, Chinese Academy of Sciences in Beijing to acknowledge his outstanding contributions to the development of superconductive wires with potentially very high impact for applications. Based on key fundamental insight and understanding of superconducting properties of materials and envisioning their potential, he designed the required, often novel, technologies for their processing. Outstanding in recent years are the innovative concepts developed for the processing and manufacture of Fe-based superconductors, with their robustness to high magnetic fields and their small electromagnetic anisotropy. Upon tailoring appropriate powder-in-tube processing technologies, wires could be processed with in-field critical currents exceeding the widely accepted threshold for practical application, reaching new milestones.

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### 2019 ESAS Awards for Young Researchers

The European Society for Applied Superconductivity ([www.esas.org](http://www.esas.org)) awards three prizes (500 EUR each) biannually to researchers under the age of 30 for outstanding work presented in person by poster or oral during the EUCAS conference. One prize is awarded in the subject areas of electronics, large-scale applications and materials, corresponding to the main technical symposia of EUCAS.



The main criteria for the award of these prizes are the originality of the work and the general quality of the poster or oral presentation. Each prize-winner receives a printed certificate and a monetary award.

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## **The Jan Evetts SuST Award**

In 2017, the 30th Anniversary of Superconductor Science and Technology (SuST) was marked by the launch of the Jan Evetts Award for the best paper published in SuST by a young researcher. The award is in fond memory of the SuST founding Editor, Professor Jan Evetts. Jan made an outstanding series of contributions to the science of superconductivity and to the understanding of superconducting materials, and was an indefatigable champion of the development of applications of superconductivity.

Now in its third year, the award aims to continue Jan's legacy of building a strong and collaborative community in superconductivity, by celebrating burgeoning new minds in the field. The award and prizes will be presented on Wednesday 4<sup>th</sup> September at EUCAS 2019.

- 1<sup>st</sup> Prize: Registration for EUCAS, free Open Access for next paper submitted to SUST, certificate, SUST print issue, and a cash prize of £500.
- 2<sup>nd</sup> Prize: Registration for EUCAS, free Open Access for next paper submitted to SUST, certificate, and SUST print issue.
- 3<sup>rd</sup> Prize: Free Open Access for next paper submitted to SUST, certificate, and SUST print issue.

SuST will be welcoming new submissions for the next award after EUCAS 2019. Please note that the submission window for the Jan Evetts Award 2020 will be 16<sup>th</sup> September 2019 – 30<sup>th</sup> March 2020.

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## **SuST/IOP Publishing Best Student Poster Prize**

Superconductor Science and Technology is keen to support the development of excellent young scientists. They, in conjunction with Institute of Physics Publishing, have generously agreed to sponsor, in each poster session, a best student poster prize consisting of a certificate and a cash award of £125. The winner will be chosen by a committee consisting of members of the SUST editorial board. Winners will be notified during the poster session and announced during the closing ceremony.



# SEC Centre Ground Floor

HALL 3

Shop

ATM

HALL 2

Exhibition  
and Catering

Poster Area

HALL 1

Loch Suite

Registration

Help Desk  
Poster and  
Exhibitor Desks

SEC  
Meeting  
Academy

CONCOURSE

Mezzanine

CARRON

M1

LOCH SUITE

DOCHART

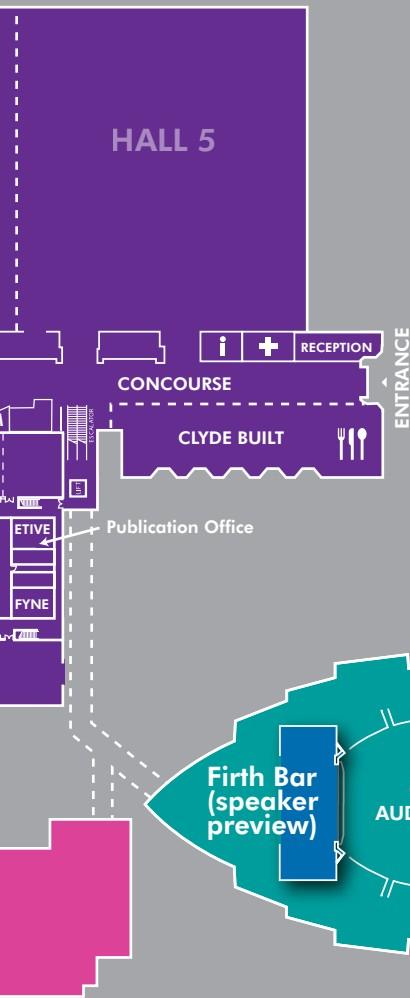
## SEC First Floor

Link Corridor to  
Armadillo and  
Crown Plaza Hotel

Crown Plaza  
Hotel

Millennium Bridge

Glasgow Science Centre



## SEC Main building:

### FIRST FLOOR

Carron, Dochart (Loch Suite)  
M2, M3, M4, M5 (Meeting Academy)

### GROUND FLOOR

Etive (Publication Office)  
Halls 1 & 2

E Hydro

## Armadillo:

### FIRST FLOOR

Firth Bar (speaker preview)  
Gala

### GROUND FLOOR

Clyde Auditorium  
Forth

Firth Bar  
(speaker preview)

CLYDE  
AUDITORIUM

Forth  
Gala

ENTRANCE

**SEC Armadillo**

# SEC SITE PLAN

# THE WORLD'S LARGEST

PT400

20W@4.3K with 50W@4.0K

PT800

20W@3.3K with 100W@3.0K

AL400

100W@2.3K or 200W@2.0K

AL600

60W@2.3K

Cryomech offers the largest selection of Gifford-McMahon Cycle and Pulse Tube Cryocoolers available anywhere on the planet. Not only are they superior in variety, the product lines also include the largest Cryocoolers commercially available anywhere.

**CRYOMECH**

310.400.2000 • [cryomech.com](http://cryomech.com)

The **ORIGINAL**  
**INNOVATORS**

# PROGRAMME AT A GLANCE

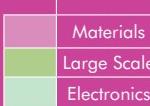
SUNDAY 1 SEPTEMBER						
		Meeting Academy (MA)				
		Halls 1 & 2	M4	M3	M2	M5
08:00 - 09:30						
09:30 - 10:00						
10:00 - 13:00			Short Course 3	Short Course 2	Short Course 1	
13:00 - 16:00		Registration				
16:00 - 17:00						
17:00 - 17:30						
17:30 - 18:00			ESAS Board Meeting			
18:00 - 20:00		Civic Welcome Reception (Glasgow Science Centre)				
						EUCAS 2019 Organising Committee Meeting

# MONDAY 2 SEPTEMBER

# TUESDAY 3 SEPTEMBER

		Armadillo			Loch Suite		MA			
	Halls 1 & 2	Clyde	Forth	Gala	Carron	Dochart	M2+M3			
08:00 - 08:45	Registration									
08:45 - 09:00		ESAS Award								
09:00 - 10:00		P1: Yanwei Ma (ESAS Award Winner)								
10:00 - 10:45	Tea									
10:45 - 12:45	Poster set up	2-MO-FT Fe-based Thin Films			2-MO-FP1 Critical Current & Flux Pinning 1	2-LO-RM Rotating Machines	2-LO-OM Specialised Magnets			
12:45 - 14:00	Lunch						IEC-IEEE Meeting			
14:00 - 16:00		Poster Session 2					Tea			
16:00 - 16.15							2-EO-DA Detector Applications			
16:15 - 18:15					2-LO-EA Electric Aircraft SPECIAL SESSION	2-LO-FH Fusion (HTS)				
18:15 - 18:30					2-MO-AP Broad Studies for Applications	2-MO-CP Coated Conductors - Properties				
18:30 - 20:00		Public Lecture - James Watt and Precision Engineering Prof John Marsh, University of Glasgow (Clyde Auditorium)					<table border="1"> <tr> <td>Materials</td> </tr> <tr> <td>Large Scale</td> </tr> <tr> <td>Electronics</td> </tr> </table>	Materials	Large Scale	Electronics
Materials										
Large Scale										
Electronics										

WEDNESDAY 4 SEPTEMBER							
		Armadillo			Loch Suite		MA
Halls 1 & 2		Clyde	Forth	Gala	Caron	Dochart	M2+M3
08:00 - 08:45	Registration						3-LO-CA Super-conducting Cavities SPECIAL SESSION
08:45 - 09:00		Jan Evetts Award					3-EO-FA Device Fabrication and Applications
09:00 - 10:00		P2: Satoshi Awaji					3-EO-SNQ SQUIDS and NanoSQUIDS
10:00 - 10:45	Tea						3-MO-BM BiSCCO-based Materials and MgB2
10:45 - 12:45	Poster set up						3-MO-FP4 Critical Current & Flux Pinning 4
12:45 - 14:00	Lunch						3-EO-TM THz and Microwave Devices
13:15 - 14:15							3-EO-TS Topological Devices and Spintronics
14:00 - 16:00	Poster Session 3						Tea
16:00 - 16:15							3-LO-TG Transportation & Grid Technologies
16:15 - 18:15							3-MO-CU Cuprates
18:15 - 20:00							3-MO-FW Fe-based Wires and Bulk
19:30 - 20:00	Coaches from SEC to Merchant Square						
20:00 - 01:00	Conference Dinner & Ceilidh (Merchant Square)						



Thursday 5 September							
		Armadillo			Loch Suite		MA
Halls 1 & 2		Clyde	Forth	Gala	Caron	Dochart	M2+M3
08:00 - 09:00	Registration						
09:00 - 10:00		P3: Irfan Siddiqi					
10:00 - 10:45	Tea						
10:45 - 11:45		P4: Amalia Ballarino					
11:45 - 12:45		ESAS Gen Assy					
12:45 - 13:00		ESAS Prizes					
13:00 - 14:00	Lunch				IEC/TC90-WG3 Meeting		
14:00 - 18:15					IEC/TC90-WG12 Meeting		
							ESAS Board Meeting

# INFORMATION FOR PRESENTERS AND MODERATORS

## Information for Oral Presentations

### **Speaker Preview and Upload Room**

Location: Firth Bar, Level 1 in the Armadillo.

Opening Hours: Presentation upload and check.

Sunday 1 September 2019: 1400 - 1800

Monday 2 September 2019: 0730 - 1800

Tuesday 3 September 2019: 0730 - 1800

Wednesday 4 September 2019: 0730 - 1800

Thursday 5 September 2019: 0730 - 1200

### **Instructions for Speakers**

Presentations will be given using the computers provided by the Conference. Presenters' personal computers cannot be used.

**All oral presenters are requested to upload their presentation at the Speaker Preview and Upload Room preferably half a day before their session.**

Presentations must be brought on an empty USB stick in PowerPoint or PDF format. The screen ratio is 16:9. A basic audio, video and running check of the presentation will be performed at this time.

All session rooms are equipped with a projector, Windows computer and PowerPoint 365, microphones, laser pointer, timer and screen.

Conference organisers will ensure that all talks are deleted from the session computers at the end of the day.

### **Timing**

Standard Talks are 15 min long. Please ensure that you leave 2 – 3 min for questions. The exact timing of your talk has been confirmed to you by email.

Invited Talks are 30 min long. Please ensure that you leave 5 minutes for questions.

Plenary Talks are 50 min long.

The session order is fixed. Oral presentations will not be changed to accommodate absences or cancellations. The time assigned to an oral presentation within the oral session is fixed.

Please arrive a 10 minutes prior to the session and introduce yourself to the session chairs.

NB: A paper will not be considered for publication in the Journal of Physics: Conference Series (JPCS) if the presentation was not given during its scheduled time at the Conference.

If you need to withdraw your presentation, please advise the staff at the Publication Office.

To avoid disruption, no photography or video recording of presentations is permitted.

## Information for Poster Presenters

### Poster Sessions

Each poster board will accommodate 1 (one) A0 (1189mm x 841mm) in either horizontal or vertical format.

Poster presenters must hang their posters prior to the session. Presenters may bring hand outs and make them available on the poster board.

Only papers that are presented at EUCAS 2019 may be considered for publication in the Journal of Physics: Conference Series (JPCS). For posters, this means that the author must be present during the session and available for discussion. Attendance will be verified by the session chairs. If an author cannot be located, the paper written from this poster will NOT be considered for publication in the JPCS.

If you have more than one poster and they are not side by side, then you need to spread your time over all poster presentations. Please leave a note (post-it notes are available at the Poster Desk) on your poster indicating the location and time you will be present. Please also inform the session chairs.

If you need to withdraw your poster, please inform the Poster Desk and the Publication Office.

## **Poster Desk**

The Poster Desk is in Hall 1. Please go to the desk to pick up the materials to hang your poster. These are the set-up times for each day:

Monday 2 September 2019: 1045 - 1245

Tuesday 3 September 2019: 1045 - 1245

Wednesday 4 September 2019: 1045 - 1245

Please check the poster plan at the Poster Desk for your poster location.

You are requested to remove posters at the end of each day (between 1815-1900). Any posters not taken down at the end of the day will be discarded. EUCAS 2019 holds no responsibility for any material left behind, lost, stolen or damaged.

## **Information for Session Chairs**

### **Oral Sessions**

Please ensure that you have a Moderator Session Report prior to starting the session. The Report will be with your student helper in your room.

If a scheduled presentation has no-show presenters and the presentation has to be cancelled (ie was not given), the corresponding manuscript, if submitted, will not be considered for peer review and published in the JPCS. So, filling and returning the Moderator Session Report is important.

If a presentation is not given, ie the presenter does not show up, please do NOT start the next talk early.

### **Prior to the Session**

- Check in with your student helper and get the Session Moderator Report
- Check with your technician that all presentations have been submitted
- Check to see that all speakers are present
- Familiarise yourself with the timer and other controls (light, if provided etc). If there are issues, please advise the technician and/or student helper.



## Sessions

- Announce the title of the session.
- Explain the ground rules: Invited Talk = 25 min + 5 min questions.  
Standard Talk = 12 + 3 min questions.
- Please introduce each speaker and title of the talk
- Please keep control of the session timing! Be firm as needed and use the timers to help you.
- Talks may encroach on question time. Please use your discretion and indicate that questions can be asked following the session.
- Please complete and return the Moderator Session Report to the Publication Office. Check off presentations as they are given. Also estimate the audience size.
- The two session chairs can alternate these tasks.
- Do not let anyone walk away with the laser pointer!
- Nominate an outstanding Contributed Presentation in the session for an invitation to submit a paper to the Special Focus Issue of Superconductor Science and Technology. (Invited Presentations have already received such an invite).

## Poster Sessions

Please ensure that you have a Moderator Session Report prior to starting the session. You can pick them up at the Publication Office.

It is not necessary to introduce the speakers or presentations. Please record any posters that were not presented. One of the authors must be present most, if not all of the time, with the poster presentation. Walk the session multiple times. Note that in some cases, an author may need to attend to more than one poster, and thus might not be present during your first survey, so that you may have to return later. Poster presenters have been instructed to inform you or leave a note, when this is the case. Posters that are mounted but missing a presenter or poster boards that are empty must be recorded on the Moderator Report.

Please hand in your Moderator Report to the Publication Office following your session or no later than Thursday 5 September 2019 at 1200 (midday).

# PROGRAMME IN DETAIL



EUCAS 2019  
GLASGOW





EUCAS 2019  
GLASGOW

SUNDAY 1 SEPTEMBER

# SUNDAY 1 SEPTEMBER

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0930-1800 **Registration**

HALL 1

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1000-1730 **Short Course 1: Design of Superconducting magnets** M3  
for particle accelerators and detectors  
Dr Paolo Ferracin, CERN, Switzerland; Prof Herman Ten Kate, University of Twente, Netherlands  
*Pre-registration required*

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1000-1730 **Course 2: Superconducting Power Devices** M2  
Dr Mark Ainslie, University of Cambridge, UK; Prof Antonio Morandi, University of Bologna, Italy; Prof Mathias Noe, Karlsruhe Institute of Technology (KIT), Germany  
*Pre-registration required*

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1000-1300 **Course 3: Superconducting Electronics and Quantum Computation** M4  
Prof Paul Seidel, Friedrich Schiller University Jena, Germany  
*Pre-registration required*

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1800-2000 **Civic Welcome Reception at Glasgow Science Centre**  
Civic reception hosted by The Rt Hon The Lord Provost of Glasgow





EUCAS 2019  
GLASGOW

MONDAY 2 SEPTEMBER

# MONDAY 2 SEPTEMBER

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0845-0900 **Welcome**

Co-chairs: John Durrell, University of Cambridge and Robert Hadfield,  
University of Glasgow  
Lord Provost of Glasgow

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0900-1000 **1-LO-KN1 Keynote Address**

**CLYDE AUDITORIUM**

**CCFE, Fusion: Now and in the Future**

Ian Chapman

UK Atomic Energy Authority and Culham Centre for Fusion Energy,  
United Kingdom

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1000-1045 **Refreshments & Exhibition**

**HALLS 1 & 2**

1045-1245 **Oral Session 1**

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1245-1400 **Lunch**

**HALLS 1 & 2**

1400-1600 **Poster Session 1**

**HALL 2, POSTER AREA**

1530-1615 **Refreshments & Exhibition**

**HALLS 1 & 2**

1615-1815 **Oral Session 2**

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1815-2000 **Exhibitor Reception & Whisky Tasting**

**HALLS 1 & 2**

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# MONDAY 2 SEPTEMBER

MONDAY

## 0845-0900 Welcome

Co-chairs: John Durrell, University of Cambridge and Robert Hadfield, University of Glasgow  
Lord Provost of Glasgow

## 0900-1000 1-LO-KN1 Keynote Address

CLYDE AUDITORIUM

Chairs: John Durrell, University of Cambridge and Robert Hadfield, University of Glasgow

### CCFE, Fusion: Now and in the Future

Ian Chapman

CEO of the UK Atomic Energy Authority and Head of the Culham Centre for Fusion Energy



Ian Chapman has held a number of international roles in fusion, including Chair of ITER international working groups. He has published over 110 journal papers, one of which was shortlisted for the Nuclear Fusion Award in 2013, and given 30 invited lead-author presentations at international conferences. He received the European Physical Society Early Career Prize in 2014, the Institute of Physics Paterson Medal in 2013, the IUPAP Plasma Physics Young Scientist Prize in 2012 and the Cavendish Medal for Best early-career UK physicist in 2011. He was made a Fellow of the Institute of Physics in 2013 and became a visiting Professor at Durham University in 2015. In 2019, he was awarded the Royal Society Kavli Medal & Lecture.

## 1000-1045 Refreshments & Exhibition

HALLS 1 &amp; 2

## Oral Session 1

1045-1245

### 1-EO-AJ - Applications of Josephson Junctions and SQUIDS

ROOM: CLYDE AUDITORIUM

Chairs: Ed Romans, UCL and Niladri Banerjee, Loughborough University

1045

### 1-EO-AJ-011

#### Addressable quantum circuits with array of Josephson field effect transistors

Kaveh Delfanazari<sup>1</sup>, Pengcheng Ma<sup>1</sup>, Ian Farrer<sup>2</sup>, David A. Ritchie<sup>1</sup>, Hannah J. Joyce<sup>1</sup>, Michael J. Kelly<sup>1</sup>, Charles G. Smith<sup>1</sup>

<sup>1</sup>University of Cambridge, United Kingdom

<sup>2</sup>University of Cambridge, University of Sheffield, United Kingdom

1115

**1-EO-AJ-02S****Identifying and Eliminating Interference in Josephson Digital Electronics**Aaron Lee<sup>1</sup>, John Przybysz<sup>1</sup>, Aaron Pesetski<sup>1</sup>, Anthony Przybysz<sup>1</sup><sup>1</sup>Northrop Grumman, United States of America

1130

**1-EO-AJ-03S****High-Tc SQUID magnetometers for multi-channel on-scalp MEG**Silvia Ruffieux<sup>1</sup>, Christoph Pfeiffer<sup>2</sup>, Maxim Chukharkin<sup>3</sup>, Minshu Xie<sup>2</sup>, Alexei Kalaboukhov<sup>2</sup>, Justin F. Schneiderman<sup>4</sup>, Dag Winkler<sup>2</sup><sup>1</sup>Chalmers University of Technology, Sweden<sup>2</sup>Department of Microtechnology and Nanoscience – MC2, Chalmers University of Technology, Sweden<sup>3</sup>Chalmers Industriteknik, Sweden<sup>4</sup>MedTech West and the Institute of Neuroscience and Physiology, Sahlgrenska Academy, University of Gothenburg, Sweden

1145

**1-EO-AJ-04S****Fast, Ultrasensitive Differential Magnetic DNA Assay Using HTS SQUID Gradiometer**Sobhan Sepehri<sup>1</sup>, Alexei Kalaboukhov<sup>1</sup>, Teresa Zardán Gómez de la Torre<sup>2</sup>, Justin F. Schneiderman<sup>3</sup>, Aldo Jesorka<sup>4</sup>, Mats Nilsson<sup>5</sup>, Jan Albert<sup>6</sup>, Maria Strømme<sup>7</sup>, Christer Johansson<sup>8</sup>, Dag Winkler<sup>1</sup><sup>1</sup>Department of Microtechnology and Nanoscience - MC2, Chalmers University of Technology, Sweden<sup>2</sup>Department of Engineering Sciences, Uppsala University, The Ångström Laboratory, Sweden<sup>3</sup>Department of Microtechnology and Nanoscience – MC2, Chalmers University of Technology, MedTech West and the Institute of Neuroscience and Physiology, University of Gothenburg, Sweden<sup>4</sup>Department of Chemistry and Chemical Engineering, Chalmers University of Technology, Sweden<sup>5</sup>Science for Life Laboratory, Department of Biochemistry and Biophysics, Stockholm University, Sweden<sup>6</sup>Department of Clinical Microbiology, Karolinska University Hospital, Department of Microbiology, Tumor and Cell Biology, Karolinska Institute, Sweden<sup>7</sup>Department of Engineering Sciences, Uppsala University, The Ångström Laboratory, Sweden  
<sup>8</sup>RISE Acero, Sweden

1200

**1-EO-AJ-05S****Effect of SQUID loop coupling on SQIF array sensitivity**Emma Mitchell<sup>1</sup>, Karl Muller<sup>1</sup>, Joern Beyer<sup>2</sup>, Wendy Purches<sup>1</sup>, Colin Pegrum<sup>3</sup>, Shane Keenan<sup>1</sup>, Chris Lewis<sup>1</sup>, Alex Grancea<sup>1</sup>, Philip Fairman<sup>1</sup>, Jeina Lazar<sup>1</sup>, Cathy Foley<sup>1</sup><sup>1</sup>CSIRO Manufacturing, Australia<sup>2</sup>Department 7.6 Cryosensors, Physikalisch-Technische Bundesanstalt, Germany<sup>3</sup>Department of Physics, University of Strathclyde, United Kingdom

1215

**1-EO-AJ-06S****High Tc SQIF for highly-sensitive microwave magnetometry**

Francois Couedo<sup>1</sup>, Eliana Recoba Pawlowski<sup>2</sup>, Julien Kermorvant<sup>3</sup>, Juan Trastoy<sup>2</sup>, Denis Crété<sup>2</sup>, Yves Lemaitre<sup>2</sup>, Bruno Marcilhac<sup>2</sup>, Christian Ulysse<sup>4</sup>, Cheryl Feuillet-Palma<sup>1</sup>, Nicolas Bergeal<sup>1</sup>, Jerome Lesueur<sup>1</sup>

<sup>1</sup>Physics and Materials Laboratory (LPEM), ESPCI, PSL, UMPC, CNRS, France

<sup>2</sup>Unité Mixte de Physique CNRS, Thales, Université Paris-Sud,  
University Paris-Saclay, France

<sup>3</sup>Thales Communication and Security, France

<sup>4</sup>Center of Nanosciences and Nanotechnologies, University Paris-Sud -  
University Paris-Saclay - CNRS, France

1230

**1-EO-AJ-07S****Highly scalable readout electronics for large multi-channel dc-SQUID systems**

Sylke Bechstein<sup>1</sup>, Dietmar Drung<sup>1</sup>, Marius Scheiner<sup>2</sup>, Frank Petsche<sup>1</sup>, Sassan Ali Valiollahi<sup>3</sup>, Henry Barthelmeß<sup>3</sup>

<sup>1</sup>Physikalisch-Technische Bundesanstalt, Germany

<sup>2</sup>Institut für angewandte Photonik e.V., Germany

<sup>3</sup>Magnicon GmbH, Germany

**1045-1245 1-MO-CS - Coated Conductors - Synthesis** ROOM: FORTH

Chairs: Teresa Puig, ICMAB-CSIC and Bernhard Holzapfel,  
Karlsruhe Institute of Technology

1045

**1-MO-CS-01I****Progress in development of high-performance REBCO tapes and wires**  
Venkat Selvamanickam<sup>1</sup>

<sup>1</sup>University of Houston, United States of America

1115

**1-MO-CS-02I****Can we reach fast growth methods for Coated Conductors at competitive cost?**

Teresa Puig<sup>1</sup>

<sup>1</sup>Institut de Ciència de Materials de Barcelona (ICMAB-CSIC), Spain

1145

**1-MO-CS-03S****Fabrication of 1 meter long multi-layered conductor for high Je**  
Hongsoo Ha<sup>1</sup>, Gwantaek Kim<sup>1</sup>, HyunWoo Noh<sup>1</sup>, Sangsoo Oh<sup>1</sup>, Jaehun Lee<sup>2</sup>, Seunghyun Moon<sup>2</sup>

<sup>1</sup>Korea Electrotechnology Research Institute, Korea, South

<sup>2</sup>SuNAM, South Korea

1200	<b>1-MO-CS-04S</b> <b>One method to improve the delamination strength of the 2G HTS Tapes</b> <u>Xingyi Zhang</u> <sup>1</sup> Lanzhou University, China
1215	<b>1-MO-CS-05S</b> <b>Scalable fabrication process for low AC loss striated HTS tapes</b> <u>Joseph Prestigiacomo</u> <sup>1</sup> , Raymond Auyeung <sup>1</sup> , Michael Osofsky <sup>1</sup> <sup>1</sup> US Naval Research Laboratory, United States of America
1230	<b>1-MO-CS-06S</b> <b>50m long multifilamentary coated conductor for high field magnets</b> <u>Anders C. Wulff</u> <sup>1</sup> , Jesper H. Lundeman <sup>2</sup> , Pernille H. Nielsen <sup>2</sup> , Ulrich Betz <sup>3</sup> , Alexander Usoskin <sup>3</sup> , Alexander Rutt <sup>3</sup> , Andrea R. Insinga <sup>4</sup> , Asger B. Abrahamsen <sup>5</sup> <sup>1</sup> Technical University of Denmark, Department of Energy Conversion and Storage, Subra Substrates A/S, Denmark <sup>2</sup> Subra Substrates A/S, Denmark <sup>3</sup> Bruker HTS GmbH, Germany <sup>4</sup> Technical University of Denmark, Department of Energy Conversion and Storage, Denmark <sup>5</sup> Technical University of Denmark, Department of Wind Energy, Denmark

<b>1045-1245 1-MO-MP - Materials Properties</b>		<b>ROOM: GALA</b>
Chair: Andrea Augieri, ENEA		
1045	<b>1-MO-MP-01S</b> <b>Transient dynamic resistance waveforms from isolated ReBCO coated conductors</b> <u>Justin Brooks</u> <sup>1</sup> , Mark Ainslie <sup>2</sup> , Zhenan Jiang <sup>1</sup> , Stuart Wimbush <sup>1</sup> , Chris Bumby <sup>1</sup> , Rodney Badcock <sup>1</sup> <sup>1</sup> Robinson Research Institute, Victoria University of Wellington, New Zealand <sup>2</sup> Bulk Superconductivity Group, Department of Engineering, University of Cambridge, United Kingdom	
1100	<b>1-MO-MP-02S</b> <b>Frequency dependent demagnetisation rate of shielded HTS tape stack</b> <u>Lukasz Tomkow</u> <sup>1</sup> , Nikolay Mineev <sup>1</sup> , Anis Smara <sup>1</sup> , Vicente Climente-Alarcon <sup>1</sup> , Bartłomiej Glowacki <sup>1</sup> <sup>1</sup> ASCG, Department of Materials Science and Metallurgy, University of Cambridge, United Kingdom	

1115

**1-MO-MP-03S****Simulations of the Effect of Surface Roughness and Coatings on Critical Currents**Alexander Blair<sup>1</sup>, Damian Hampshire<sup>1</sup><sup>1</sup>Durham University, Department of Physics, Superconductivity Group, United Kingdom

1130

**1-MO-MP-04S****Optimization of the oxygenation process in CSD-grown REBa<sub>2</sub>Cu<sub>3</sub>O<sub>7-x</sub> films**Pablo Cayado<sup>1</sup>, Daniel Hauck<sup>1</sup>, Manuela Erbe<sup>1</sup>, Jens Hänisch<sup>1</sup>, Bernhard Holzapfel<sup>1</sup><sup>1</sup>Karlsruhe Institute of Technology (KIT), Germany

1145

**1-MO-MP-05S****Critical-Current Surface I<sub>c</sub>(T,B) of Densified Ag-Sheathed Ba<sub>1-x</sub>K<sub>x</sub>Fe<sub>2</sub>As<sub>2</sub> Tapes**Marco Bonura<sup>1</sup>, He Huang<sup>2</sup>, Chao Yao<sup>2</sup>, Yanwei Ma<sup>2</sup>, Carmine Senatore<sup>2</sup><sup>1</sup>University of Geneva - Department of Quantum Matter Physics, Switzerland<sup>2</sup>Chinese Academy of Sciences - Institute of Electrical Engineering, China

1200

**1-MO-MP-06S****Development of MVT-MgB<sub>2</sub> bulks assisted by combined defect detection & simulation**Akiyasu Yamamoto<sup>1</sup>, Yu Sanogawa<sup>1</sup>, Kosei Iso<sup>1</sup>, Takuya Obara<sup>1</sup>, Mikihiko Saito<sup>1</sup><sup>1</sup>Tokyo University of Agriculture and Technology, Japan

1215

**1-MO-MP-07S****2D Strain Dependent J<sub>c</sub> for (RE)BCO Tapes in High Fields for Fusion Applications**Jack Greenwood<sup>1</sup>, Elizabeth Surrey<sup>2</sup>, Damian Hampshire<sup>1</sup><sup>1</sup>Durham University, Department of Physics, Superconductivity Group, United Kingdom<sup>2</sup>Culham Centre for Fusion Energy, Culham Science Centre, United Kingdom

1230

**1-MO-MP-08S****Biaxial stress measurements in a GdBCO-Ag bulk during field-cooled magnetization**Kai Yuan (Danny) Huang<sup>1</sup>, Dominic Barthlott<sup>2</sup>, Mark Ainslie<sup>1</sup>, Yunhua Shi<sup>1</sup>, Jan Srpcič<sup>3</sup>, Difan Zhou<sup>3</sup>, Devendra Namburi<sup>1</sup>, Anthony Dennis<sup>1</sup>, Sora Namba<sup>4</sup>, Hiroyuki Fujishiro<sup>4</sup>, Martin Boll<sup>5</sup>, David Cardwell<sup>1</sup>, John Durrell<sup>1</sup><sup>1</sup>Department of Engineering, University of Cambridge, United Kingdom<sup>2</sup>Karlsruhe Institute of Technology, Institute of Technical Physics, Germany<sup>3</sup>Department of Physics, Shanghai University, China<sup>4</sup>Department of Physical Science and Materials Engineering, Faculty of Science and Engineering, Iwate University, Japan<sup>5</sup>Siemens AG Corporate Technology, Germany

Chairs: Mathias Noe, Karlsruhe Institute of Technology  
and Hideo Sugane, SWCC Showa Cable Systems co., ltd.

1045

**1-LO-CA-011****Progress in the development of the HTS Power Cable Projects in Korea**

Chulhyu Lee<sup>1</sup>, Hyeongseok Yang<sup>1</sup>, Minwon Park<sup>2</sup>, Iwakuma Masataka<sup>3</sup>

<sup>1</sup>KEPCO, Korea, South

<sup>2</sup>Changwon National University, Korea, South

<sup>3</sup>Kyushu University, Japan

1115

**1-LO-CA-02S****Electrical and cryogenic tests of the 1200 m HTS DC cable system**

Andrey Kashcheyev<sup>1</sup>, Victor Sytnikov<sup>1</sup>, Timofey Ryabin<sup>1</sup>, Victor Karpov<sup>1</sup>,  
Mikhail Dubinin<sup>1</sup>

<sup>1</sup>R&D Center at Federal Grid Company of Unified Energy System, Russia

1130

**1-LO-CA-03S****The 2nd in-grid operation of superconducting cable in Yokohama project**

Takato Masuda<sup>1</sup>, Yuichi Ashibe<sup>1</sup>, Takahiro Saito<sup>1</sup>, Tadahiko Minamino<sup>1</sup>,  
Toshiya Morimura<sup>1</sup>, Michihiko Watanabe<sup>1</sup>, Hirohito Yamaguchi<sup>2</sup>, Masayuki Tanazawa<sup>2</sup>, Tomoo Mimura<sup>2</sup>

<sup>1</sup>Sumitomo Electric Industries, Ltd., Japan

<sup>2</sup>Tokyo Electric Power Company Holdings, Japan

1145

**1-LO-CA-04S****Development and test of a 35 kA - HTS CroCo cable demonstrator**

Klaus-Peter Weiss<sup>1</sup>, Walter H. Fietz<sup>1</sup>, Mathias Heiduk<sup>1</sup>, Christian Lange<sup>1</sup>, Alan Preuss<sup>1</sup>, Michael J. Wolf<sup>1</sup>

<sup>1</sup>Karlsruhe Institute of Technology (KIT), Institute for Technical Physics, Germany

1200

**1-LO-CA-05S****Compact 2G HTS power cable: new cold tests results**

Vitaly Vysotsky<sup>1</sup>, Sergey Fetisov<sup>1</sup>, Vasily Zubko<sup>1</sup>, Sergey Zanegin<sup>1</sup>,  
Alexander Nosov<sup>1</sup>

<sup>1</sup>Russian Scientific R&D Cable Institute, Russia

1215

**1-LO-CA-06S****Superconducting Gas-insulated DC Coaxial Dipole**

Peter Cheetham<sup>1</sup>, Chul Kim<sup>1</sup>, Lukas Gruber<sup>2</sup>, Sastry Pamidi<sup>3</sup>

<sup>1</sup>Center for Advanced Power Systems, United States of America

<sup>2</sup>Georgia Institute of Technology, United States of America

<sup>3</sup>FAMU-FSU College of Engineering, United States of America

1045-1245 **1-LO-FL - Fusion (LTS)**

ROOM: DOCHART

Chairs: Antonio Della Corte, ENEA Frascati Research Centre  
and Joseph Minervini, Massachusetts Institute of Technology

1045

**1-LO-FL-011****The Route to the Use of Nb3Sn in ITER: Overcoming Failures and Successes**Neil Mitchell<sup>1</sup><sup>1</sup>ITER Organisation, France

1115

**1-LO-FL-021****Overview of the magnet system of the European DEMO fusion reactor**  
Kamil Sedlak<sup>1</sup>, et al.<sup>2</sup><sup>1</sup>École Polytechnique Fédérale de Lausanne (EPFL), Swiss Plasma Center (SPC), Switzerland<sup>2</sup>Magnet group of EUROfusion DEMO project, Various

1130

**1-LO-FL-031****The superconducting magnet system of the Italian Divertor Tokamak Test Facility**

Aldo Di Zenobio<sup>1</sup>, Luigi Muzzi<sup>1</sup>, Simonetta Turtù<sup>1</sup>, Luigi Affinito<sup>1</sup>, Alessandro Anemona<sup>1</sup>, Roberto Bonifetto<sup>2</sup>, Valentina Corato<sup>1</sup>, Chiarasole Fiamozzi Zignani<sup>1</sup>, Lorenzo Giannini<sup>1</sup>, Giuseppe Messina<sup>1</sup>, Luigi Morici<sup>1</sup>, Gherardo Romanelli<sup>1</sup>, Laura Savoldi<sup>2</sup>, Andrea Zappatore<sup>2</sup>, Roberto Zanino<sup>2</sup>, Lorenzo Zoboli<sup>1</sup>, Antonio della Corte<sup>1</sup>

<sup>1</sup>ENEA Frascati Research Centre, Italy<sup>2</sup>NEMO Group - Politecnico di Torino, Italy

1145

**1-LO-FL-04S****Development of Toroidal Field Superconducting Prototype Magnet for CFETR**Jinxing Zheng<sup>1</sup>, Yuntao Song<sup>1</sup>, Kun Lu<sup>1</sup>, Xufeng Liu<sup>1</sup><sup>1</sup>Institute of Plasma Physics Chinese Academy of Sciences, China

1200

**1-LO-FL-05S****Quench detection of fast plasma events for the EAST PF coils**Yanlan Hu<sup>1</sup><sup>1</sup>Institute of Plasma Physics Chinese Academy of Sciences, China

1215

**1-LO-FL-06S****An ANSYS-Based Model for Arcs in Large Superconducting Magnets**

Sam Tippetts<sup>1</sup>, Ruben Otin<sup>2</sup>, Heng Zhang<sup>2</sup>, Andrew Holmes<sup>2</sup>, Simon McIntosh<sup>3</sup>, Pierre Bauer<sup>3</sup>, Neil Mitchell<sup>3</sup>, Arjan Verweij<sup>4</sup>, Michal Maciejewski<sup>4</sup>, Elizabeth Surrey<sup>2</sup>, Shanliang Zheng<sup>3</sup>

<sup>1</sup>UKAEA, ITER, United Kingdom<sup>2</sup>UKAEA, United Kingdom<sup>3</sup>ITER, France<sup>4</sup>CERN, Switzerland

MONDAY

1230

**1-LO-FL-07S****Estimation of Performance of Nb3Sn CICC with Thermal Strain Distribution**Rainer Wesche<sup>1</sup>, Kamil Sedlak<sup>1</sup>, Pierluigi Bruzzone<sup>1</sup><sup>1</sup>École Polytechnique Fédérale de Lausanne (EPFL), Swiss Plasma Center (SPC), Switzerland1245-1400 **Lunch****HALLS 1 & 2****Poster Session 1**

1400-1600

**HALL 2, POSTER AREA****1-EP-EA - Electronics Applications**

Chairs: Sobhan Sepehri, Chalmers University of Technology and Sylke Bechstein,  
Physikalisch-Technische Bundesanstalt

**1-EP-EA-I01****Simulation model extraction from superconductor circuit packaging and shielding**  
Coenrad Fourie<sup>1</sup>, Kyle Jackman<sup>1</sup><sup>1</sup>Stellenbosch University, South Africa**1-EP-EA-I02****Insulating, metallic and superconducting phase in single nanowires**Hannes Rotzinger<sup>1</sup>, Jan Nicolas Voss<sup>1</sup>, Yannick Schön<sup>1</sup>, Micha Wildermuth<sup>1</sup>, Alexey V Ustinov<sup>1</sup><sup>1</sup>Karlsruhe Institute of Technology (KIT), Germany**1-EP-EA-I03****Hybrid superconducting-magnetoresistive sensor for low magnetic field detection**  
Elena Stetco<sup>1</sup>, Ana-Cristina Davidas<sup>1</sup>, Mircea Nasu<sup>1</sup>, Ovidiu Pop<sup>1</sup>, Mihai Gabor<sup>1</sup>, Traian Petrisor Jr.<sup>1</sup><sup>1</sup>Technical University of Cluj-Napoca, Romania**1-EP-EA-I04****Monolithic ICs of Josephson junctions and nTrons for large-capacity memories**Kyosuke Sano<sup>1</sup>, Naoki Kondo<sup>1</sup>, Masamitsu Tanaka<sup>1</sup>, Taro Yamashita<sup>2</sup>, Masumi Inoue<sup>3</sup>, Akira Fujimaki<sup>1</sup><sup>1</sup>Nagoya University, Japan<sup>2</sup>Nagoya University, JST-PRESTO, Japan<sup>3</sup>Meijo University, Japan**1-EP-EA-S05****Transport properties of NdFeAs(O,F) superconducting thin wires**Takafumi Hatano<sup>1</sup>, Yasunari Tsuji<sup>1</sup>, Keisuke Kondo<sup>1</sup>, Kazumasa Iida<sup>1</sup>, Nobuyuki Zen<sup>2</sup>, Yasunori Mawatari<sup>2</sup>, Hiroshi Ikuta<sup>1</sup><sup>1</sup>Nagoya University, Japan<sup>2</sup>National Institute of Advanced Industrial Science and Technology (AIST), Japan

**1-EP-EA-S06****A Study on the system for measuring quantum frequency conversion signal**Dong Kyu Kim<sup>1</sup>, Zae Ill Kim<sup>1</sup>, Hyuk Yim Sin<sup>1</sup>, Tae Hyun Kim<sup>1</sup>, Yong Sup Ihn<sup>1</sup><sup>1</sup>Agency for Defense Development, South Korea**1-EP-EA-S07****Towards Quantum Frequency Conversion between Microwave and Optical domains**Zaeill Kim<sup>1</sup>, Dong Kyu Kim<sup>1</sup>, Hyuk Sin Yim<sup>1</sup>, Taehyun Kim<sup>1</sup>, Su-Yong Lee<sup>1</sup><sup>1</sup>Agency for Defense Development, South Korea**1-EP-EA-S08****Fabrication of Ti transition-edge sensors for near infrared photon counting**Zheng Wang<sup>1</sup>, Wen Zhang<sup>1</sup>, Pei-Zhan Li<sup>1</sup>, Jia-Qiang Zhong<sup>1</sup>, Yue Geng<sup>1</sup>, Wei Miao<sup>1</sup>, Jin-Feng Wang<sup>2</sup>, Sheng-Cai Shi<sup>1</sup><sup>1</sup>Purple Mountain Observatory, Chinese Academy of Sciences, China<sup>2</sup>Nanjing Institute of Astronomical Optics & Technology, Chinese Academy of Sciences, China**1-EP-EA-S09****Adiabatic logic circuits using quantum phase-slip junctions**Uday Sravan Goteti<sup>1</sup>, Ran Cheng<sup>1</sup>, Michael Hamilton<sup>1</sup><sup>1</sup>Auburn University, United States of America**1-EP-EA-S10****Comparative analysis of highly linear response superconductor cells**Nikolay V. Kolotinskiy<sup>1</sup>, Victor K. Kornev<sup>2</sup>, Daniil E. Bazulin<sup>2</sup><sup>1</sup>Department of Physics, Lomonosov Moscow State University, Quantum<sup>Technology Centre, Department of Physics, Lomonosov Moscow State University, Russia</sup><sup>2</sup>Department of Physics, Lomonosov Moscow State University, Russia**1-EP-EA-S11****Superconducting terahertz modulator**Biao-Bing Jin<sup>1</sup><sup>1</sup>School of Electronic Science and Engineering, Nanjing University, China**1-EP-EA-S12****Characterization of NbN tunnel junction developed on Si substrate**Wei Qiu<sup>1</sup>, Hirotaka Terai<sup>1</sup><sup>1</sup>National Institute of Information and Communications Technology, Japan**1-EP-EA-S13****Tailored design of YBCO thin films and patterned arrays**Alexey V Pan<sup>1</sup>, Antony Jones<sup>2</sup>, Simon KH Lam<sup>3</sup>, Jia Du<sup>3</sup>, Igor Rudnev<sup>4</sup>, Sergey Rubanov<sup>5</sup><sup>1</sup>School of Physics and Institute for Superconducting & Electronic Materials, University of Wollongong, Australia<sup>2</sup>Institute for Superconducting and Electronic Materials, University of Wollongong, Australia<sup>3</sup>CSIRO Manufacturing, Australia<sup>4</sup>National Research Nuclear University MEPhI (Moscow Engineering Physics Institute), Russia<sup>5</sup>Advanced Microscopy Facility, Bio21 Institute, University of Melbourne, Australia

## 1-EP-JJ - Josephson Junctions

Chairs: Roberta Caruso, Università degli Studi di Napoli Federico II and Michael Faley, Forschungszentrum Juelich

### 1-EP-JJ-101

#### **Planar MgB<sub>2</sub> Josephson junctions and arrays made by focused helium ion beam**

Ke Chen<sup>1</sup>, Leila Kasaei<sup>1</sup>, Mengjun Li<sup>2</sup>, Thomas Melbourne<sup>1</sup>, Hussein Hijazi<sup>2</sup>, Torgny Gustafsson<sup>2</sup>, Leonard Feldman<sup>2</sup>, Xiaoxing Xi<sup>1</sup>

<sup>1</sup>Temple University, United States of America

<sup>2</sup>Rutgers University, United States of America

### 1-EP-JJ-102

#### **Circularly polarized terahertz radiation from intrinsic Josephson junctions**

Itsuhiro Kakeya<sup>1</sup>, Asem Elarabi<sup>1</sup>, Shuma Fujita<sup>1</sup>, Keiichiro Maeda<sup>1</sup>, Manabu Tsujimoto<sup>2</sup>

<sup>1</sup>Kyoto University, Japan

<sup>2</sup>University of Tsukuba, Japan

### 1-EP-JJ-103

#### **RF properties of high T<sub>c</sub> Josephson junctions made by focused He+ ion irradiation**

François Couédo<sup>1</sup>, Paul Amari<sup>1</sup>, Cheryl Feuillet-Palma<sup>1</sup>, Nicolas Bergeal<sup>1</sup>,

Christian Ulysse<sup>2</sup>, Jérôme Lesueur<sup>3</sup>

<sup>1</sup>Physics and Materials Laboratory (LPEM), ESPCI, PSL, UMPC, CNRS, France

<sup>2</sup>Center for Nanosciences and Nanotechnologies, University Paris-Sud - University Paris-Saclay - CNRS, France

<sup>3</sup>Physics and Materials Laboratory (LPEM), ESPCI, PSL, UMPC, CNRS, Center for Nanosciences and

Nanotechnologies, University Paris-Sud - University Paris-Saclay - CNRS, France

### 1-EP-JJ-104

#### **Shapiro steps as a probe of overheating in superconducting nanobridges**

Connor Shelly<sup>1</sup>, Patrick See<sup>1</sup>, Ivan Rungger<sup>1</sup>, Jonathan Williams<sup>1</sup>

<sup>1</sup>National Physical Laboratory, United Kingdom

### 1-EP-JJ-105

#### **Fabrication corner-like Josephson junctions based on pnictide single crystals**

Noor Hasan<sup>1</sup>

<sup>1</sup>The University of Technology, Iraq

### 1-EP-JJ-S06

#### **Anodization-free fabrication of cross-type Nb/Al-AlOx/Nb Josephson junctions**

Fabienne Bauer<sup>1</sup>, Christian Enss<sup>1</sup>, Sebastian Kempf<sup>1</sup>

<sup>1</sup>Kirchhoff-Institute for Physics, Heidelberg University, Germany

### 1-EP-JJ-S08

#### **Control of roughness and stress of Nb film for Nb/Al-AlOx/Nb Josephson junctions**

Yu Wu<sup>1</sup>, Liliang Ying<sup>1</sup>, Jie Ren<sup>1</sup>, Wanning Xu<sup>1</sup>, Yingyi Shao<sup>1</sup>, Liyun Chen<sup>1</sup>, Xue Zhang<sup>1</sup>,

Xiaoping Gao<sup>1</sup>, Wei Peng<sup>1</sup>, Masaaki Maezawa<sup>1</sup>, Zhen Wang<sup>1</sup>

<sup>1</sup>Shanghai Institute of Microsystem and Information Technology (SIMIT), Chinese Academy of Sciences, China

**1-EP-JJ-S09****Oscillation modes of serial Josephson-junction arrays coupled to resonator**

Victor K. Kornev<sup>1</sup>, Nikolay V. Kolotinskiy<sup>2</sup>, Anna Yu. Levochkina<sup>1</sup>

<sup>1</sup>Department of Physics, Lomonosov Moscow State University, Russia

<sup>2</sup>Department of Physics, Lomonosov Moscow State University, Quantum Technology Centre, Department of Physics, Lomonosov Moscow State University, Russia

**1-EP-JJ-S10****Internally shunted NbN Josephson junctions with tunable TaNx barriers**

Lu Zhang<sup>1</sup>, Zhen Wang<sup>1</sup>

<sup>1</sup>State Key Laboratory of Functional Material for Informatics, Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences, China

**1-EP-JJ-S11****Switchable supercurrent in ferromagnetic Josephson junction**

Junwen Zeng<sup>1</sup>, Lei Chen<sup>1</sup>

<sup>1</sup>Shanghai Institute of Microsystem and Information Technology (SIMIT), Chinese Academy of Sciences, China

**1-EP-JJ-S12****Transport properties in Josephson devices with metallic nanowires**

Sergey Bakurskiy<sup>1</sup>, Olga Skryabina<sup>2</sup>, Sergey Kozlov<sup>3</sup>, Nikolay Klenov<sup>4</sup>, Igor Soloviev<sup>5</sup>, Mikhail Kupriyanov<sup>5</sup>, Igor Golovchansky<sup>3</sup>, Aleksey Klimenko<sup>6</sup>, Kirill Napolskii<sup>7</sup>, Valeriy Ryazanov<sup>8</sup>, Dmitriy Roditchev<sup>9</sup>, Alexander Golubov<sup>10</sup>, Vasiliy Stolyarov<sup>3</sup>

<sup>1</sup>Skobeltsyn Institute of Nuclear Physics, Lomonosov Moscow State University

<sup>1</sup>(2), Moscow Institute of Physics and Technology, Russia

<sup>2</sup>Moscow Institute of Physics and Technology, Institute of Solid State Physics RAS, Russia

<sup>3</sup>Moscow Institute of Physics and Technology, Russia

<sup>4</sup>Faculty of Physics, M.V. Lomonosov Moscow State University, Russia

<sup>5</sup>Skobeltsyn Institute of Nuclear Physics, Lomonosov Moscow State University

<sup>1</sup>(2), Russia

<sup>6</sup>Department of Materials Science, MSU, Russia

<sup>7</sup>Department of Chemistry, MSU, Russia

<sup>8</sup>Institute of Solid State Physics RAS, Russia

<sup>9</sup>Laboratoire de Physique et d'Etudes des Matériaux, LPEM, UMR-8213, ESPCI-Paris, PSL, CNRS, Sorbonne University, France

<sup>10</sup>Moscow Institute of Physics and Technology, Russian Federation, Faculty of Science and Technology and MESA+ Institute for Nanotechnology, University of Twente, The Netherlands, The Netherlands

**1-EP-JJ-S13****Low-frequency Electrodynamical Parameters of Spin-Filter Josephson Junctions**

Halima Giovanna Ahmad<sup>1</sup>, Davide Massarotti<sup>2</sup>, Roberta Caruso<sup>3</sup>, Gabriele Campagnano<sup>4</sup>, Procolo Lucignano<sup>4</sup>, Avradeep Pal<sup>5</sup>, Giovanni Piero Pepe<sup>1</sup>, Mark Blamire<sup>6</sup>, Francesco Tafuri<sup>6</sup>

<sup>1</sup>Università degli Studi di Napoli "Federico II" - Dipartimento di Fisica "Ettore Pancini", Consiglio Nazionale delle Ricerche - CNR-SPIN, Italy

<sup>2</sup>Consiglio Nazionale delle Ricerche - CNR-SPIN, Università di Napoli "Federico II" - Dipartimento di Ingegneria Elettrica e delle Tecnologie dell'Informazione, Italy

<sup>3</sup>SeeQC.EU, s.r.l., Consiglio Nazionale delle Ricerche - CNR-SPIN, Università degli Studi di Napoli "Federico II" - Dipartimento di Fisica "Ettore Pancini", Italy

<sup>4</sup>Consiglio Nazionale delle Ricerche - CNR-SPIN, Italy

<sup>5</sup>Department of Materials Science and Metallurgy - University of Cambridge, United Kingdom

<sup>6</sup>Consiglio Nazionale delle Ricerche - CNR-SPIN, Università degli Studi di Napoli "Federico II" - Dipartimento di Fisica "Ettore Pancini", Italy

**1-EP-JJ-S14****An Initial Analysis for Thermally Enabled Models in JoSIM**

Bernard Venter<sup>1</sup>, Johannes Delpert<sup>1</sup>, Coenrad Fourie<sup>1</sup>

<sup>1</sup>Stellenbosch University, South Africa

**1-EP-JJ-S15****Josephson junction simulation model extraction from measured IV curves**

Johannes Delpert<sup>1</sup>, Coenrad Fourie<sup>1</sup>

<sup>1</sup>Stellenbosch University, South Africa

**1-EP-JJ-S16****Analysis of systematic errors in a Josephson Arbitrary Waveform Synthesizer**

Marco Kraus<sup>1</sup>, Oliver Kieler<sup>1</sup>, Ralf Behr<sup>1</sup>, Jonas Herick<sup>1</sup>, Stephan Bauer<sup>1</sup>, Luis Palafox<sup>1</sup>, Franz Josef Ahlers<sup>1</sup>

<sup>1</sup>PTB, Germany

**1-EP-JJ-S17****2D model of an inductively interacting inhomogeneous Josephson junction stack**

Alexander Grib<sup>1</sup>, Paul Seidel<sup>2</sup>

<sup>1</sup>Kharkiv V. N. Karazin National University, Ukraine

<sup>2</sup>Institut für Festkörperphysik, Friedrich Schiller University Jena, Germany

**1-EP-JJ-S18****Processing and Characterization of High Current Density NbN Josephson Junctions**

Huiwu Wang<sup>1</sup>, Xin Tang<sup>2</sup>, Qiyu Zhang<sup>1</sup>, Zhen Wang<sup>1</sup>

<sup>1</sup>Shanghai Institute of Microsystem and Information Technology (SIMIT), Chinese Academy of Sciences, China



**1-EP-JJ-S19****Self-shunted MoRe-doped Si-MoRe junctions with a low specific capacitance**

Volodymyr Shaternik<sup>1</sup>, Andrii Shapovalov<sup>2</sup>, Pascal Febvre<sup>3</sup>, Frank Schmidl<sup>4</sup>, Paul Seidel<sup>5</sup>

<sup>1</sup>Institute for Metal Physics Kiev, Ukraine

<sup>2</sup>Institute for Superhard Materials Kiev, Ukraine

<sup>3</sup>Université Savoie Mont Blanc, France

<sup>4</sup>Friedrich Schiller University Jena, Germany

<sup>5</sup>Institut für Festkörperphysik, Friedrich Schiller University Jena, Germany

**1-EP-JJ-S20****Perpendicular magnetic field dependence of the Josephson current**

Norimichi Watanabe<sup>1</sup>, Asuka Natori<sup>1</sup>, Chun-Ping Chen<sup>1</sup>, Susumu Abe<sup>1</sup>, Akiyoshi Nakayama<sup>1</sup>

<sup>1</sup>Kanagawa University, Japan

**1-EP-SP - Single Photon Detectors**

Chairs: Dmitry Morozov, University of Glasgow and Shigehito Miki, NICT

**1-EP-SP-I01****Ultra-broadband microfiber-coupled superconducting single-photon detector**

Xintong Hou<sup>1</sup>, Ni Yao<sup>2</sup>, Lixing You<sup>3</sup>, Hao Li<sup>3</sup>, Weijun Zhang<sup>3</sup>

<sup>1</sup>Shanghai Institute of Microsystem and Information Technology (SIMIT), Chinese Academy of Sciences, Zhejiang University, University of Chinese Academy of Sciences, China

<sup>2</sup>Zhejiang University, China

<sup>3</sup>Shanghai Institute of Microsystem and Information Technology (SIMIT), Chinese Academy of Sciences, University of Chinese Academy of Sciences, China

**1-EP-SP-I02****Optimising superconducting nanowire single-photon detectors for the mid-infrared**

Gregor Taylor<sup>1</sup>, Dmitry Morozov<sup>1</sup>, Kleanthis Erotopoulos<sup>1</sup>, Shigehito Miki<sup>2</sup>, Hirotaka Terai<sup>2</sup>, Robert Hadfield<sup>1</sup>

<sup>1</sup>University of Glasgow, United Kingdom

<sup>2</sup>Advanced ICT Research Institute, National Institute of Information and Communications Technology, Japan

**1-EP-SP-I03****Gathering key-elements for YBCO based superconducting single photon detectors**

Paul Amari<sup>1</sup>, Cheryl Feuillet-Palma<sup>2</sup>, Javier Briatico<sup>3</sup>, Françoise Couédo<sup>2</sup>, Nicolas Bergeal<sup>2</sup>, Jérôme Lesueur<sup>2</sup>

<sup>1</sup>ESPCI Paris, PSL Research University, Sorbonne Université, CNRS, France

<sup>2</sup>ESPCI Paris, France

<sup>3</sup>Unité Mixte CNRS-Thales, France

**1-EP-SP-S04****A compact, low-power <1K cooling platform for superconducting nanowire detectors**

Emily Ronson<sup>1</sup>, Simon Chase<sup>1</sup>, Lee Kenny<sup>1</sup>

<sup>1</sup>Chase Research Cryogenics Ltd, United Kingdom

**1-EP-SP-S05****Amorphous MoSi films and superconducting nanowire single photon detectors**

Han Bao<sup>1</sup>, Jin Jin<sup>1</sup>, Xiaoqing Jia<sup>1</sup>, Xuecou Tu<sup>1</sup>, Labao Zhang<sup>1</sup>, Qingyuan Zhao<sup>1</sup>, Lin Kang<sup>1</sup>, Jian Chen<sup>1</sup>, Peiheng Wu<sup>1</sup>

<sup>1</sup>Nanjing University, China

**1-EP-SP-S06****Waveguide Integrated SNSPD Arrays for Scalable Quantum Photonics**

Gavin Orchin<sup>1</sup>, Jharna Paul<sup>1</sup>, Umberto Nasti<sup>1</sup>, Kleanthis Erotokritou<sup>1</sup>, Marc Sorel<sup>1</sup>, Robert Heath<sup>2</sup>, Ben Slater<sup>2</sup>, Döndü Sahin<sup>2</sup>, Jorge Barreto<sup>2</sup>, Robert Hadfield<sup>1</sup>

<sup>1</sup>University of Glasgow, United Kingdom

<sup>2</sup>University of Bristol, United Kingdom

**1-EP-SP-S07****Resolving photon number with a 16-pixel interleaved SNSPD array**

Weijun Zhang<sup>1</sup>, J. Huang<sup>1</sup>, C. L. Lv<sup>1</sup>, L. X. You<sup>1</sup>, C. J. Zhang<sup>1</sup>, G. Z. Xu<sup>1</sup>, X. Q. Sun<sup>1</sup>, H. Li<sup>1</sup>, Z. Wang<sup>1</sup>, X. M. Xie<sup>1</sup>

<sup>1</sup>Shanghai Institute of Microsystem and Information Technology (SIMIT), Chinese Academy of Sciences, China

**1-EP-SP-S08****Multispectral SNSPD based upon dielectric mirror**

Peng Hu<sup>1</sup>, Hao Li<sup>1</sup>, Lixing You<sup>1</sup>, Heqing Wang<sup>1</sup>, Weijun Zhang<sup>1</sup>, Zhen Wang<sup>1</sup>

<sup>1</sup>Shanghai Institute of Microsystem and Information Technology (SIMIT), Chinese Academy of Sciences, China

**1-EP-SP-S09****A 16-pixel NbN nanowire single photon detector coupled with 300 μm fiber**

Qi Chen<sup>1</sup>, LaBao Zhang<sup>1</sup>, Biao Zhang<sup>1</sup>

<sup>1</sup>Research Institute of Superconducting Electronics, China

**1-EP-SP-S10****Microwave multiplexing of superconducting nanowire single-photon detector arrays**

Koran Jackson<sup>1</sup>, Jon Collins<sup>2</sup>, Umberto Nasti<sup>1</sup>, Robert H. Hadfield<sup>1</sup>, Alessandro Casaburi<sup>1</sup>

<sup>1</sup>University of Glasgow, United Kingdom

<sup>2</sup>University of Glasgow, National Physical Laboratory, United Kingdom

**1-EP-SP-S11****Effect of thermal conductance on performance of single-photon detectors**

Nicolo Petrini<sup>1</sup>, Ilya Charaev<sup>1</sup>, Andrew Dane<sup>1</sup>, Di Zhu<sup>1</sup>, Marco Colangelo<sup>1</sup>, Karl K. Berggren<sup>1</sup>

<sup>1</sup>Massachusetts Institute of Technology, United States of America

**1-EP-SP-S12****A single-photon computational camera using superconducting nanowire imagers**

Ling-Dong Kong<sup>1</sup>, Qing-Yuan Zhao<sup>1</sup>, Kai Zheng<sup>1</sup>, Shi Chen<sup>1</sup>, Hai-Yang-Bo Lu<sup>1</sup>, La-Bao Zhang<sup>1</sup>, Xiao-Qing Jia<sup>1</sup>, Jian Chen<sup>1</sup>, Lin Kang<sup>1</sup>, Pei-Heng Wu<sup>1</sup>

<sup>1</sup>School of Electronic Science and Engineering, Nanjing University, China

**1-EP-SP-S13****Superconducting nanowire single photon detector for 2  $\mu\text{m}$ -wavelength**Hui Zhou<sup>1</sup><sup>1</sup>Shanghai Institute of Microsystem and Information Technology (SIMIT), Chinese Academy of Sciences, China**1-EP-SP-S14****Low temperature electronics for optimizing the performance of SNSPD**Chaolin Lv<sup>1</sup>, Weijun Zhang<sup>1</sup>, Xingyu Zhang<sup>1</sup>, Hao Li<sup>1</sup>, Lixing You<sup>1</sup><sup>1</sup>Shanghai Institute of Microsystem and Information Technology (SIMIT), Chinese Academy of Sciences, China**1-EP-SP-S15****Multi-mode fiber coupled SNSPD with low system dark count rate**Lixing You<sup>1</sup>, Chengjun Zhang<sup>1</sup><sup>1</sup>Shanghai Institute of Microsystem and Information Technology (SIMIT), Chinese Academy of Sciences, China**1-EP-SP-I16****Thin film optimization for superconducting nanowire single-photon detector array**Umberto Nasti<sup>1</sup>, Dmitry Morozov<sup>1</sup>, Gregor Taylor<sup>1</sup>, Archan Banerjee<sup>1</sup>, Robert M. Heath<sup>1</sup>, Alessandro Casaburi<sup>1</sup>, Robert H. Hadfield<sup>1</sup><sup>1</sup>University of Glasgow, United Kingdom**1-LP-AM2 - Accelerator Magnets 2**

Chairs: Jeroen van Nugteren, CERN and Michael Green, Lawrence Berkeley Laboratory

**1-LP-AM2-I01****Mechanical design of nested 4 layer Canted Cosine Theta CCT corrector**Rafal Ortwein<sup>1</sup>, Jacek Blocki<sup>1</sup>, Glyn Kirby<sup>2</sup>, Jeroen van Nugteren<sup>2</sup><sup>1</sup>Institute of Nuclear Physics Polish Academy of Sciences, Poland<sup>2</sup>CERN, Switzerland**1-LP-AM2-I02****Conceptual design of a HTS magnet for a particle physics experiment in space**Lucio Rossi<sup>1</sup>, Magnus Dam<sup>2</sup>, Gijs de Rijk<sup>2</sup>, Enrico Chesta<sup>2</sup>, William Burger<sup>3</sup>, Roberto Iuppa<sup>4</sup>, Rita Carpentiero<sup>5</sup><sup>1</sup>CERN, Switzerland, ASI, University of Trento, TIFPA, Italy<sup>2</sup>CERN, Switzerland<sup>3</sup>TIFPA, Italy<sup>4</sup>University of Trento, Italy<sup>5</sup>Agenzia Spaziale Italiana, Italy**1-LP-AM2-I03****Superconducting Magnetic System of the SPD setup at NICA**Alexander Kovalenko<sup>1</sup><sup>1</sup>JINR, Russia

**1-LP-AM2-I04****Long term operation of the superconducting triplet quadrupoles with cryocoolers**Kensuke Kusaka<sup>1</sup><sup>1</sup>RIKEN Nishina Center for Accelerator-Based Science, Japan**1-LP-AM2-I05****Cold Test of the First Serial HL-LHC MCBRD at 4.5K in IMPCAS**Dongsheng Ni<sup>1</sup>, Wenjie Yang<sup>1</sup>, Yu Liang<sup>1</sup>, Wei Wu<sup>1</sup>, Xudong Wang<sup>1</sup>, Qingjin Xu<sup>2</sup><sup>1</sup>Institute of Modern Physics, Chinese Academy of Sciences, China<sup>2</sup>Institute of High Energy Physics, Chinese Academy of Sciences, China**1-LP-AM2-S06****Manufacture and Test Results of 10 kA HTS Current Leads for Accelerator Magnet**Chenglian Liu<sup>1</sup><sup>1</sup>Institute of Plasma Physics Chinese Academy of Sciences, China**1-LP-AM2-S07****Protection Study of the Superconductive Space Radiation Shielding Magnet**François-Paul Juster<sup>1</sup>, Christophe Berriaud<sup>1</sup><sup>1</sup>CEA, IRFU, France**1-LP-AM2-S08****Distribution Feedbox for the Superconducting Link (SCLink) and Magnets of HL-LHC**Wendell Bailey<sup>1</sup>, Yifeng Yang<sup>1</sup><sup>1</sup>Institute of Cryogenics, University of Southampton, United Kingdom**1-LP-AM2-S09****Busbar and splice technology development for HL-LHC new inner triplet magnets**Efstratios Tsolakis<sup>1</sup>, Ludovic Favier<sup>1</sup>, Rosario Principe<sup>1</sup>, Herve Prin<sup>1</sup>, Christian Scheuerlein<sup>1</sup><sup>1</sup>CERN, Greece**1-LP-AM2-S10****Design of the consolidated LHC dipole diode busbar insulation system**Florian Meuter<sup>1</sup>, Thomas Sahner<sup>1</sup>, Jean Philippe Tock<sup>1</sup>, Christian Scheuerlein<sup>1</sup><sup>1</sup>CERN, Switzerland**1-LP-AM2-S11****FRIB superconducting dipoles design and construction status**Ting Xu<sup>1</sup>, Al-Mahmoud Yamen<sup>1</sup>, Paul Brindza<sup>2</sup>, Nathan Bultman<sup>1</sup>, Earle Burkhardt<sup>1</sup>, Jingping Chen<sup>1</sup>, Jon DeKamp<sup>1</sup>, Rao Ganni<sup>1</sup>, Nusair Hasan<sup>1</sup>, Lakshmi Lalitha<sup>1</sup>, Samuel Miller<sup>1</sup>, Hai Nguyen<sup>1</sup>, Mohit Patil<sup>1</sup>, Alexander Plastun<sup>1</sup>, Mauricio Portillo<sup>1</sup>, Marc Reaume<sup>1</sup>, Mark Shuptrar<sup>1</sup>, John Wenstrom<sup>1</sup>, Mengxin Xu<sup>1</sup>, Bryan Tousignant<sup>1</sup>, Wei Chang<sup>1</sup>, Jeff Hulbert<sup>1</sup><sup>1</sup>Michigan State University, United States of America<sup>2</sup>J3Thomas Jefferson National Accelerator Facility, Michigan State University, United States of America

**1-LP-AM2-S12****Analysis of Short-Circuit Transients in the LHC Main Dipole Circuit**

Akriki Liakopoulou<sup>1</sup>, Anne-Johan Annema<sup>2</sup>, Lorenzo Bortot<sup>1</sup>, Zinur Charifouline<sup>1</sup>, Michal Maciejewski<sup>1</sup>, Marco Prioli<sup>3</sup>, Emmanuele Ravaioli<sup>1</sup>, Cora Salm<sup>2</sup>, Jurriaan Schmitz<sup>2</sup>, Arjan Verweij<sup>1</sup>

<sup>1</sup>CERN, Switzerland

<sup>2</sup>University of Twente, The Netherlands

<sup>3</sup>INFN, Italy

**1-LP-AM2-S13****Electro-thermal analysis of the superconducting dipole circuit of SIS100**

Vivien Raginel<sup>1</sup>, Christian Roux<sup>1</sup>, Piotr Szwangruber<sup>1</sup>, Walter Freisleben<sup>1</sup>

<sup>1</sup>GSI Helmholtzzentrum fuer Schwerionenforschung GmbH, Germany

**1-LP-AM2-S14****Operation of the thin superconducting solenoid of the CMD-3 detector**

Sergey Karpov<sup>1</sup>, Alexey Bragin<sup>1</sup>, Alexander Ruban<sup>1</sup>, Yuri Popov<sup>1</sup>, Victor Okhapkin<sup>1</sup>

<sup>1</sup>Budker Institute of Nuclear Physics, Russia

**1-LP-AM2-S15****Performance Analysis of Cabled Bundle-Barrier PIT Wire for the HL-LHC Project**

Simon C. Hopkins<sup>1</sup>, Algirdas Baskys<sup>1</sup>, Christopher B. Segal<sup>1</sup>, Bernardo Bordini<sup>1</sup>, Jerome Fleiter<sup>1</sup>, Amalia Ballarino<sup>1</sup>

<sup>1</sup>CERN, Switzerland

**1-LP-FCL - FCL Devices**

Chairs: Fedor Gömöry, Institute of Electrical Engineering, Slovak Academy of Sciences and Naoki Hayakawa, Nagoya University

**1-LP-FCL-I01****Advances of the EC project FASTGRID**

Pascal Tixador<sup>1</sup>, Marcus Bauer<sup>2</sup>, Albert Calleja<sup>3</sup>, Christian-Eric Bruzek<sup>4</sup>, Guy Deutscher<sup>5</sup>, Bertrand Dutoit<sup>6</sup>, Fedor Gomory<sup>7</sup>, Luciano Martini<sup>8</sup>, Mathias Noe<sup>9</sup>, Xavier Obradors<sup>10</sup>, Marcela Pekarcikova<sup>11</sup>, Frédéric Sirois<sup>12</sup>

<sup>1</sup>Université Grenoble Alpes – CNRS Grenoble INP, France

<sup>2</sup>THEVA, Germany

<sup>3</sup>OXOLUTIA, Spain

<sup>4</sup>NEXANS, France

<sup>5</sup>Tel Aviv University, Israel

<sup>6</sup>EPFL, Switzerland

<sup>7</sup>IEE, Slovakia

<sup>8</sup>RSE, Italy

<sup>9</sup>KIT, Germany

<sup>10</sup>ICMAB, Spain

<sup>11</sup>STUBA, Slovakia

<sup>12</sup>EPM, Canada

**1-LP-FCL-I02****Resistive SFCL for Turboelectric Distributed Electric Propulsion Aircraft**

Xiaozhe Pei<sup>1</sup>, Wenjuan Song<sup>1</sup>, Xianwu Zeng<sup>2</sup>

<sup>1</sup>University of Bath, United Kingdom

<sup>2</sup>GE, United Kingdom

**1-LP-FCL-I03****Study the alliance between SFCL and hybrid DC breaker for protecting HVDC grid**

Jean Lévéque<sup>1</sup>, Yacine Ayachi Amor<sup>1</sup>, Gaëtan Didier<sup>2</sup>, Farid Hamoudi<sup>3</sup>

<sup>1</sup>GREEN - Université de Lorraine, France

<sup>2</sup>Groupe de Recherche en Electrotechnique et Electronique de Nancy (GREEN), Faculté des Sciences et Technologies Université de Lorraine, France

<sup>3</sup>Laboratoire de Maîtrise des Energies Renouvelables (LMER), Faculté de Technologie, Université de Bejaia, Algeria

**1-LP-FCL-I04****Quench-induced Breakdown Characteristics of HTS Pancake Coil for Resistive SFCL**

Naoki Hayakawa<sup>1</sup>, Masataka Mimbu<sup>1</sup>, Hiroki Kojima<sup>1</sup>, Shigeki Isojima<sup>2</sup>, Minoru Kuwata<sup>3</sup>

<sup>1</sup>Nagoya University, Japan

<sup>2</sup>Sumitomo Electric Industries, Ltd., Japan

<sup>3</sup>Nissin Electric Co, Ltd., Japan

**1-LP-FCL-S05****A Superconducting FCL for Protection and Improving Operation of a DC Microgrid**

David Penna Fernandes<sup>1</sup>, Daniel Henrique Nogueira Dias<sup>1</sup>, Felipe Sass<sup>1</sup>, Alexandre Bittencourt<sup>1</sup>

<sup>1</sup>Fluminense Federal University, Brazil

**1-LP-FCL-S06****Detailed Review of a Novel Model SFCL for Grid**

Janos Arpad Kosa<sup>1</sup>, Qing Shao<sup>2</sup>, Istvan Vajda<sup>3</sup>

<sup>1</sup>Neumann Janos University, Hungary

<sup>2</sup>Guilin University of Electronic Technology, China

<sup>3</sup>University of Debrecen, Hungary

**1-LP-FCL-S07****Electrical Protection of a Hybrid Aircraft Using Superconductor**

Janos Arpad Kosa<sup>1</sup>

<sup>1</sup>Neumann Janos University, Hungary

**1-LP-FCL-S08****Analysis of a novel HTS Fault Current Limiting Cable in the VSC-MTDC**

Benkang Yang<sup>1</sup>, Dong Zhang<sup>1</sup>, Qiuju Li<sup>1</sup>, Zhifeng Zhang<sup>1</sup>, Liangzhen Lin<sup>1</sup>

<sup>1</sup>Key Laboratory of Applied Superconductivity, Chinese Academy of Sciences; Institute of Electrical Engineering, Chinese Academy of Sciences; University of Chinese Academy of Sciences, China

**1-LP-FCL-S09****Operational Characteristics of OCR using SFCL's Impedance Compensation**Sung-Hun Lim<sup>1</sup><sup>1</sup>Department of Electrical Engineering, Korea, South**1-LP-FCL-S10****Design and current limiting test for a hybrid SFCL with bias magnetic field**Jiahui Zhu<sup>1</sup><sup>1</sup>SGCC, China**1-LP-FCL-S11****Analysing Faults and SFCL Response in Electric Aircraft**Hamoud Alafnan<sup>1</sup>, Xiaoze Pei<sup>2</sup>, Moanis Khedr<sup>2</sup>, Weijia Yuan<sup>3</sup><sup>1</sup>University of Bath, University of Hail, United Kingdom<sup>2</sup>University of Bath, United Kingdom<sup>3</sup>University of Strathclyde, United Kingdom**1-LP-FCL-S12****Analysis on protection coordination in LVDC with SFCL**Hyeong-Jin Lee<sup>1</sup>, Jin-Su Kim<sup>1</sup>, Sung-Hun Lim<sup>1</sup>, Sang-Yun Yun<sup>2</sup>, Jae-Chul Kim<sup>1</sup><sup>1</sup>Department of Electrical Engineering, Soongsil University, Korea, South<sup>2</sup>Department of Electrical Engineering, Channam National University, Korea, South**1-LP-FCL-S13****Flux-Lock Type SFCL using Mechanical Switch without Additional Driving Source**Sung-Hun Lim<sup>1</sup><sup>1</sup>Soongsil University, South Korea**1-LP-FCL-S14****Optimization of a RSFCL model using PHIL experimentation.**Guanbin Huang<sup>1</sup>, Jean Lévêque<sup>1</sup>, Gaëtan Didier<sup>1</sup><sup>1</sup>Group of Research in Electrical Engineering of Nancy (GREEN), University of Lorraine, France**1-LP-FCL-S15****Shell and core-type magnetic circuits in inductive SFCL under asymmetric faults**João Murta-Pina<sup>1</sup>, Nuno Vilhena<sup>2</sup>, Anabela Pronto<sup>2</sup>, Roberto Oliveira<sup>2</sup>, Pedro Arsénio<sup>3</sup><sup>1</sup>Faculdade de Ciências e Tecnologia - FCT NOVA, Portugal<sup>2</sup>Centre of Technology and Systems - Uninova, Portugal<sup>3</sup>EDP LABLELEC, Portugal**1-LP-FCL-S16****Design of an HTS Fault Current Limiting Module for 30 kV MDVC Power Grid**Jooyeong So<sup>1</sup>, Seyeon Lee<sup>1</sup>, Woo-Seok Kim<sup>1</sup>, Kyeongdal CHOI<sup>1</sup><sup>1</sup>Korea Polytechnic University, South Korea**1-LP-FCL-S17****Optimal Design of DC Resistive SFCL with Split Reactor in VSC-HVDC**Zhifeng Zhang<sup>1</sup>, Huijuan Gao<sup>1</sup>, Qingquan Qiu<sup>1</sup>, Guomin Zhang<sup>1</sup>, Liangzhen Lin<sup>1</sup><sup>1</sup>Key Laboratory of Applied Superconductivity, Chinese Academy of Sciences, China

**1-LP-FCL-S18****Protective Coordination between Protective Relays in a Power System with SFCL**Sung-Hun Lim<sup>1</sup><sup>1</sup>Soongsil University, South Korea**1-LP-FCL-S19****A Comparative Study on the Effectiveness of SFCLs in a DC Power System**Jaein Lee<sup>1</sup>, Changsoon Kim<sup>1</sup>, Van Quan Dao<sup>1</sup>, Minwon Park<sup>1</sup>, In-Keun Yu<sup>1</sup><sup>1</sup>Changwon National University, South Korea**1-LP-FM - Fusion Magnets**

Chairs: Rainer Wesche, École Polytechnique Fédérale de Lausanne

and Neil Mitchell, ITER Organization

**1-LP-FM-I01****Optimization design and mechanical analysis of the CFETR TF coil**Xiaogang Liu<sup>1</sup>, Fan Wu<sup>1</sup>, Xiang Gao<sup>1</sup><sup>1</sup>Institute of Plasma Physics Chinese Academy of Sciences, China**1-LP-FM-I02****Commissioning and first operating phases of the W7-X Quench-Detection-System**Matthias Schneider<sup>1</sup>, Dietrich Birns<sup>1</sup>, Marko Fricke<sup>1</sup>, Thomas Rummel<sup>1</sup><sup>1</sup>Quench Detection System, Germany**1-LP-FM-I03****Design and development progress of ReBCO CICC conductor for CFETR**Huan Jin<sup>1</sup><sup>1</sup>Institute of Plasma Physics Chinese Academy of Sciences, China**1-LP-FM-I04****A scalable HTS quench analysis model for fusion Central Solenoid magnets**Yuhu Zhai<sup>1</sup><sup>1</sup>Princeton University, United States of America**1-LP-FM-I05****Impact of Mechanical and Thermal Cycles on ITER Toroidal Field Coil Conductors**Marco Breschi<sup>1</sup>, Lorenzo Cavallucci<sup>1</sup>, Denis Bessette<sup>2</sup>, Florent Gauthier<sup>2</sup>, Neil Mitchell<sup>2</sup>, Vladimir Tronza<sup>2</sup><sup>1</sup>University of Bologna, Italy<sup>2</sup>ITER Organization, France**1-LP-FM-S06****Topology optimization for superconducting magnet in helical fusion reactor**Hitoshi Tamura<sup>1</sup>, Takuya Goto<sup>1</sup>, Junichi Miyazawa<sup>1</sup>, Teruya Tanaka<sup>1</sup>, Nagato Yanagi<sup>1</sup><sup>1</sup>National Institute for Fusion Science, Japan

**1-LP-FM-S07****Analysis of mechanical properties of CFETR TF CICC cable with different design**Zichuan Guo<sup>1</sup>, Chao Dai<sup>2</sup>, Jinggang Qin<sup>2</sup><sup>1</sup>Institute of Plasma Physics Chinese Academy of Sciences, University of Science and Technology of China, China<sup>2</sup>Institute of Plasma Physics Chinese Academy of Sciences, China**1-LP-FM-S08****Improved Resistance Measurement Method of the KSTAR Superconducting Coils**Hirofumi Yonekawa<sup>1</sup>, Jinsub Kim<sup>1</sup>, Young-ok Kim<sup>1</sup>, Kwang-pyo Kim<sup>1</sup>, Yong Chu<sup>1</sup><sup>1</sup>National Fusion Research Institute, South Korea**1-LP-FM-S09****A PSpice-Based Electric Circuit Model for Arcs in Large Superconducting Magnets**Heng Zhang<sup>1</sup>, Ruben Otin<sup>1</sup>, Sam Tippetts<sup>1</sup>, Andrew Holmes<sup>1</sup>, Simon McIntosh<sup>2</sup>, Pierre Bauer<sup>2</sup>, Neil Mitchell<sup>2</sup>, Arjan Verweij<sup>3</sup>, Michal Maciejewski<sup>3</sup>, Hanni Lux<sup>1</sup>, Elizabeth Surrey<sup>1</sup>, Shanliang Zheng<sup>2</sup><sup>1</sup>UKAEA, United Kingdom<sup>2</sup>ITER, France<sup>3</sup>CERN, Switzerland**1-LP-FM-S10****Preliminary Design and Stability Analysis of the CFETR PF Conductor**Muhammad Talib Hussain<sup>1</sup>, Wu Yu<sup>2</sup><sup>1</sup>Institute of Plasma Physics Chinese Academy of Sciences, University of Science and Technology of China, China<sup>2</sup>Institute of Plasma Physics Chinese Academy of Sciences, China**1-LP-FM-S11****Development of the quench protection system for the CFETR CS model coil**Yuanyuan Ma<sup>1</sup><sup>1</sup>Institute of Plasma Physics Chinese Academy of Sciences, China**1-LP-FM-S12****Feasibility Study of ITER In-Vessel Coils Bracket Manufacture and Integration**Aihua Xu<sup>1</sup>, Chao Dai<sup>1</sup><sup>1</sup>Institute of Plasma Physics Chinese Academy of Sciences, China**1-LP-FM-S13****Test Results and analysis of a prototype joint sample for the CFETR CSMC**Guanghui Ma<sup>1</sup><sup>1</sup>Chinese Academy of Sciences, China**1-LP-FM-S14****Developments of NDE method of jacket welds for ITER In-Vessel coil joints**Xiaochuan Liu<sup>1</sup><sup>1</sup>Institute of Plasma Physics Chinese Academy of Sciences, China

**1-LP-FM-S15****Investigation of Trade-off Solution in Mechanical Edge Joint of STARS Conductors**

Sotaro Sato<sup>1</sup>, Satoshi Ito<sup>1</sup>, Hidetoshi Hashizume<sup>1</sup>

<sup>1</sup>Department of Quantum Science and Energy Engineering, Graduate School of Engineering, Tohoku University, Japan

**1-LP-FM-S16****Analysis of eddy current loss for CFETR TF coil case**

Xufeng Liu<sup>1</sup>, Jinxing Zheng<sup>1</sup>, Shuangsong Du<sup>1</sup>, Changle Feng<sup>1</sup>

<sup>1</sup>Institute of Plasma Physics, Chinese Academy of Science, China

**1-LP-FM-S17****Thermal-hydraulic Analysis of TF Fast Discharge on CFETR**

Xinghao Wen<sup>1</sup>, Junjun Li<sup>2</sup>, Yong Ren<sup>2</sup>, Dongquan Wang<sup>2</sup>, Xiang Gao<sup>2</sup>

<sup>1</sup>University of Science and Technology of China, China

<sup>2</sup>Institute of Plasma Physics, Chinese Academy of Sciences, China

**1-LP-FM-S18****The preliminary thermal hydraulic analysis of TF coil on CFETR**

Junjun Li<sup>1</sup>, Xinghao Wen<sup>1</sup>, Yong Ren<sup>1</sup>, Xiaogang Liu<sup>1</sup>, Zhaoliang Wang<sup>1</sup>

<sup>1</sup>Institute of Plasma Physics Chinese Academy of Sciences, China

**1-LP-FM-S19****Inductive Noise Cancellation Method for Quench Detection of the KSTAR CS Coils**

Jinsub Kim<sup>1</sup>, Youngmu Jeon<sup>1</sup>, Hirofumi Yonekawa<sup>1</sup>, Kwang pyo Kim<sup>1</sup>, Yong Chu<sup>1</sup>

<sup>1</sup>National Fusion Research Institute, South Korea

**1-LP-FM-I20****Modelling of quench propagation in pancake-wound coils for fusion applications**

Roberto Bonifetto<sup>1</sup>, Laura Savoldi<sup>1</sup>, Roberto Zanino<sup>1</sup>, Andrea Zappatore<sup>1</sup>

<sup>1</sup>NEMO Group, Dipartimento Energia, Politecnico di Torino, Italy

**1-LP-FM-S21****On the Numerical Issues in Thermo-hydraulic Modeling with the CryoSoft Suite**

Dong Keun Oh<sup>1</sup>, Sangjun Oh<sup>1</sup>, Luca Bottura<sup>2</sup>, Monika Lewandowska<sup>3</sup>

<sup>1</sup>National Fusion Research Institute, Korea, South

<sup>2</sup>CERN, Switzerland

<sup>3</sup>West Pomeranian University of Technology Szczecin, Poland

**1-LP-FM-S22****7.1 Tesla Cryogen-Free Gyrotron magnet for the ITER development programme**

Roger Mitchell<sup>1</sup>

<sup>1</sup>Cryogenic Ltd, United Kingdom

**1-LP-FM-S25****Transverse pressure tests on HTS strands**

Ortenzia Dicuonzo<sup>1</sup>, Davide Uglietti<sup>1</sup>, Rainer Wesche<sup>1</sup>, Pierluigi Bruzzone<sup>1</sup>

<sup>1</sup>EPFL-SPC, Switzerland

**1-LP-PC - Power Cables**

Chairs: Min Zhang, University of Strathclyde and Elena Martinez, ICMA  
(CSIC – University of Zaragoza)

**1-LP-PC-I01****Efficient HTS DC- Cable for Power Distribution in Hybrid-Electric Aircraft**

Steffen Elschner<sup>1</sup>, Sonja I. Schlachter<sup>2</sup>, Joerg Brand<sup>3</sup>, Stefan Fink<sup>2</sup>, Bernhard Holzapfel<sup>2</sup>, Andrej Kudymow<sup>2</sup>, Severin Strauss<sup>2</sup>

<sup>1</sup>Mannheim University of Applied Science, Germany

<sup>2</sup>Karlsruhe Institute of Technology (KIT), Institute for Technical Physics (ITeP), Germany

<sup>3</sup>Ingenieurbuero Brand, Germany

**1-LP-PC-I02****Feasibility of ultra-compact HTS CrossConductor based power transmission cables**

Dustin Kottonau<sup>1</sup>, Michael Wolf<sup>1</sup>, Walter Fietz<sup>1</sup>, Joerg Stammen<sup>2</sup>, Holger Hirsch<sup>2</sup>

<sup>1</sup>Karlsruhe Institute of Technology (KIT), Institute for Technical Physics, Germany

<sup>2</sup>University of Duisburg-Essen - Institute for Power Transmission and Storage, Germany

**1-LP-PC-I03****Cryogenic rectifiers connected HTS generators for future all electric aircraft**

Abdelrahman El-Wakeel<sup>1</sup>, Sriharsha Venuturumilli<sup>1</sup>, Min Zhang<sup>1</sup>, Weijia Yuan<sup>1</sup>

<sup>1</sup>University of Strathclyde, United Kingdom

**1-LP-PC-I04****Component Mass Contributions in Superconducting Motors for Commercial Aviation**

Kent Hamilton<sup>1</sup>, Swarn Kalsi<sup>2</sup>, Zhenan Jiang<sup>1</sup>, Rod Badcock<sup>1</sup>

<sup>1</sup>Robinson Research Institute, New Zealand

<sup>2</sup>Kalsi Green Power Systems, United States of America

**1-LP-PC-I05****Standardization of Critical Current Test Method of Superconducting Cables**

Teruo Matsushita<sup>1</sup>, Masaru Kiuchi<sup>1</sup>, Gen Nishijima<sup>2</sup>, Takato Masuda<sup>3</sup>, Shinichi Mukoyama<sup>4</sup>, Yuji Aoki<sup>5</sup>, Masanao Mimura<sup>6</sup>

<sup>1</sup>Kyushu Institute of Technology, Japan

<sup>2</sup>National Institute for Materials Science, Japan

<sup>3</sup>Sumitomo Electric Industries, Japan

<sup>4</sup>Furukawa Electric Co., Ltd., Japan

<sup>5</sup>SWCC Showa Cable Systems Co., Ltd., Japan

<sup>6</sup>The Japanese Electric Wire & Cable Maker's Association, Japan

**1-LP-PC-I06****Feasibility study of application of HTS cable in large city distribution grids**

Tianhui Yang<sup>1</sup>, Ying Xin<sup>1</sup>, Hui Jin<sup>1</sup>, Bo Tian<sup>2</sup>

<sup>1</sup>School of Electrical and Information Engineering, Tianjin University, China

<sup>2</sup>Futong Group (Tianjin) Superconductor Technologies and Applications Co., Ltd., China

**1-LP-PC-S07****Determining the switch-gear operation times along the electric aircraft profile**Sriharsha Venuturumilli<sup>1</sup>, Min Zhang<sup>1</sup>, Weijia Yuan<sup>1</sup><sup>1</sup>University of Strathclyde, United Kingdom**1-LP-PC-S08****Adoption of getter pump for HTS superconducting cable system**Michihiko Watanabe<sup>1</sup>, Takato Masuda<sup>1</sup>, Tomoo Mimura<sup>2</sup>, Masayuki Tanazawa<sup>2</sup>, Hirohito Yamaguchi<sup>2</sup><sup>1</sup>Sumitomo Electric Industries, Ltd., Japan<sup>2</sup>Tokyo Electric Power Company Holdings, Japan**1-LP-PC-S09****Design and Loss Analysis of a Novel Underwater Wireless Power Transfer System**Liu Guanjie<sup>1</sup><sup>1</sup>Institute of Electrical Engineering, Chinese Academy of Sciences, China**1-LP-PC-S10****High Temperature Superconducting (HTS) Cable Application to Ship Deperming Work**Megumi Hirota<sup>1</sup><sup>1</sup>Non-Profit Organization, Naval Ship Magnetic and UEP Research Committee, Japan**1-LP-PC-S11****Development of tri-axial superconducting cable system for plants**Hideo Sugane<sup>1</sup><sup>1</sup>SWCC Showa Cable Systems co., Ltd., Japan**1-LP-PC-S12****2D FE modelling of the AC transport power loss in multi-layer 1G cables**Alexander Petrov<sup>1</sup>, James Pilgrim<sup>1</sup>, Igor Golosnoy<sup>1</sup><sup>1</sup>University of Southampton, United Kingdom**1-LP-PC-S13****AC losses of 23kV 60MVA 3-Phase Coaxial HTS Cable for normal and fault cases**Jaeun Yoo<sup>1</sup>, Seokju Lee<sup>2</sup>, DuYean Won<sup>1</sup>, HyukChan Son<sup>3</sup>, HyungSuk Yang<sup>1</sup><sup>1</sup>Korea Electric Power Corporation Research Institute, South Korea<sup>2</sup>Changwon National University, South Korea<sup>3</sup>Korea Electric Power Corporation, South Korea**1-LP-PC-S14****Design optimization of high-voltage HTS three-phase cables with screened phases**Pavel Degtyarenko<sup>1</sup>, Sergey Kopylov<sup>1</sup>, Nikolay Balashov<sup>1</sup>, Vladimir Zheltov<sup>1</sup>, Valery Altov<sup>1</sup>, Andrey Arkhangelsky<sup>1</sup>, Sergey Samoilenkova<sup>1</sup><sup>1</sup>IJHT RAS, Russia

**1-LP-PC-S15****Railways systems based on superconducting DC transmission**

Masaru Tomita<sup>1</sup>, Kenji Suzuki<sup>1</sup>, Yusuke Fukumoto<sup>1</sup>, Atsushi Ishihara<sup>1</sup>, Tomoyuki Akasaka<sup>1</sup>, Yusuke Kobayashi<sup>1</sup>, Taiki Onji<sup>1</sup>

<sup>1</sup>Railway Technical Research Institute, Japan

**1-LP-PC-S16****Research of Overcurrent Stability of 100kV/1kA HTS Cable Cooled by the 90K LNG**

Qijun Li<sup>1</sup>, Dong Zhang<sup>2</sup>, Benkang Yang<sup>2</sup>, Zhifeng Zhang<sup>3</sup>, Liangzhen Lin<sup>3</sup>

<sup>1</sup>Key Laboratory of Applied Superconductivity, Chinese Academy of Sciences, China

<sup>2</sup>Key Laboratory of Applied Superconductivity, Chinese Academy of Sciences; Institute of Electrical Engineering, Chinese Academy of Sciences; University of Chinese Academy of Sciences, China

<sup>3</sup>Key Laboratory of Applied Superconductivity, Chinese Academy of Sciences; Institute of Electrical Engineering, Chinese Academy of Sciences, China

**1-LP-PC-S17****Electromagnetic design of a DC HTS cable for the future French railway network**

Kévin Berger<sup>1</sup>, Ghazi Hajiri<sup>2</sup>, Rémi Dorget<sup>1</sup>, Guillaume Escamez<sup>3</sup>, Christian-Eric Bruzek<sup>3</sup>, Hervé Caron<sup>4</sup>

<sup>1</sup>GREEN - Université de Lorraine, Faculté des Sciences et Technologies, France

<sup>2</sup>GREEN - Université de Lorraine, Faculté des Sciences et Technologies, SNCF Réseau - Direction Générale Industrielle et Ingénierie, France

<sup>3</sup>Nexans France, France

<sup>4</sup>SNCF Réseau - Direction Générale Industrielle et Ingénierie, France

**1-LP-PC-S18****Efficient 3D model for coaxial HTS cable with anisotropic homogenous approach**

Min Yao<sup>1</sup>, Quan Li<sup>2</sup>, Hongye Zhang<sup>2</sup>

<sup>1</sup>University of Edinburgh, United Kingdom

<sup>2</sup>Institute of Energy System, School of Engineering, the University of Edinburgh, United Kingdom

**1-LP-PC-S19****Design of the HTS Power Cable for an Energy Pipeline Project**

Dong Zhang<sup>1</sup>, Liye Xiao<sup>1</sup>, Qingquan Qiu<sup>1</sup>, Yuping Teng<sup>1</sup>, Jingye Zhang<sup>1</sup>, Naihao Song<sup>1</sup>, Xiaoji Du<sup>1</sup>, Guomin Zhang<sup>1</sup>, Liangzhen Lin<sup>1</sup>

<sup>1</sup>Institute of Electrical Engineering, Chinese Academy of Sciences, China

**1-LP-PC-S20****Design and performance analysis of a three-phase HTS coaxial power cable**

Seong Yeol Kang<sup>1</sup>, Dinh Vuong Le<sup>1</sup>, Seok Ju Lee<sup>1</sup>, Minwon Park<sup>1</sup>, In Keun Yu<sup>1</sup>

<sup>1</sup>Changwon National University, South Korea

**1-LP-PC-S21****Abstract of the development of HTC DC cable based on 2G YBCO wire**

Chen Huijuan<sup>1</sup>

<sup>1</sup>Suzhou Advanced Materials Research Institute, China

**1-LP-PC-S22****Experimental Test Results of AC 23kV 60MVA Class 3-Phase Coaxial HTS Cable**

JinBae Na<sup>1</sup>, YoongSeo Jang<sup>1</sup>, Seokju Lee<sup>2</sup>, Minwon Park<sup>2</sup>, Du Yean Won<sup>3</sup>, Hyung Suk Yang<sup>3</sup>

<sup>1</sup>LS Cable&System, South Korea

<sup>2</sup>Changwon National University, South Korea

<sup>3</sup>KEPCO, South Korea

**1-MP-BI - BiSCCO-materials**

Chairs: Christian Scheuerlein, CERN and Jianyi Jiang, Florida State University

**1-MP-BI-S01****Improving the physical properties of Bi,Pb-2223 phase by pelletization pressure**

Ramadan Awad<sup>1</sup>, Ahmad Najem<sup>1</sup>, Hadi Basma<sup>1</sup>, Ashraf Mustafa<sup>1</sup>

<sup>1</sup>Beirut Arab University, Lebanon

**1-MP-BI-S02****Macroscopic Factors to define the high Jc nanostructure in Bi-2212 Round Wires**

Fumitake Kametani<sup>1</sup>, Abiola Oloye<sup>1</sup>, Yavuz Oz<sup>1</sup>, Jianyi Jiang<sup>1</sup>, Ulf Trociewitz<sup>1</sup>, Eric Hellstrom<sup>1</sup>, David Larbalestier<sup>1</sup>

<sup>1</sup>Florida State University, National High Magnetic Field Laboratory, United States of America

**1-MP-BI-S03****Strong high Je Bi2212 wire fabricated into high current cables and coils**

Alexander Otto<sup>1</sup>

<sup>1</sup>Solid Material Solutions, LLC, United States of America

**1-MP-BI-S04****Development of low ac loss HTS wires and cables with Bi2212 superconductor**

Alexander Otto<sup>1</sup>

<sup>1</sup>Solid Material Solutions, LLC, United States of America

**1-MP-BI-S05****Joint development between Bi-2212/Ag wires**

Tayebeh Mousavi<sup>1</sup>, Danielle Gilst<sup>2</sup>, Ella Carlsen-O'Connor<sup>2</sup>, Ziad Melhem<sup>3</sup>, Yibing Huang<sup>4</sup>, Chris Grovenor<sup>2</sup>, Susannah Speller<sup>2</sup>

<sup>1</sup>Materials Department, University of Oxford, United Kingdom

<sup>2</sup>Department of Materials, University of Oxford, United Kingdom

<sup>3</sup>Oxford Instruments, United Kingdom

<sup>4</sup>Bruker OST LLC, United States of America

**1-MP-BI-S06****Effects of oxygen doping in Bi-2212 wires and bulk samples**

David G. Bader<sup>1</sup>, Mark O. Rikel<sup>2</sup>, Jianyi Jiang<sup>3</sup>, Yavuz Oz<sup>3</sup>, David C. Larbalestier<sup>3</sup>, Michael Eisterer<sup>1</sup>

<sup>1</sup>Atominstitut, TU Wien, Austria

<sup>2</sup>Deutsche Nanoschicht GmbH, Germany

<sup>3</sup>National High Magnetic Field Laboratory, Florida State University, United States of America

**1-MP-BI-S07****Performance and Microstructure of Bi-2212 Wire under Different OverPressures**Dongsheng Yang<sup>1</sup>, Jinggang Qin<sup>1</sup><sup>1</sup>Institute of Plasma Physics Chinese Academy of Sciences, China**1-MP-BI-S08****Indentation effect on strain sensitivity to critical current of Bi2212 strand**Chao Dai<sup>1</sup><sup>1</sup>Institute of Plasma Physics Chinese Academy of Sciences, China**1-MP-CC1 - Coated Conductors 1**

Chair: Yutaka Yoshida, Nagoya university

**1-MP-CC1-I01****Life Cycle Assessment of High-Temperature-Superconductor Tape Production**Alexander Buchholz<sup>1</sup>, Mathias Noe<sup>2</sup>, Veit Große<sup>3</sup>, Marcel Weil<sup>4</sup><sup>1</sup>Institute for Technology Assessment and Systems Analysis, Germany<sup>2</sup>Institute for Technical Physics, Germany<sup>3</sup>THEVA Dünnschichttechnik GmbH, Germany<sup>4</sup>Institute for Technology Assessment and Systems Analysis, Helmholtz Institute Ulm, Germany**1-MP-CC1-I02****A Novel Combinatorial Chemistry Inkjet Printing Strategy for REBCO film growth**Albert Queraltó<sup>1</sup>, Flavio Pino<sup>1</sup>, Adrià Pacheco<sup>1</sup>, Lavinia Saltarelli<sup>1</sup>, Diana Garcia<sup>1</sup>, Susagna Ricart<sup>1</sup>, Xavier Obradors<sup>1</sup>, Teresa Puig<sup>1</sup><sup>1</sup>Institut de Ciència de Materials de Barcelona (ICMAB-CSIC), Spain**1-MP-CC1-I03****Energy-based vector hysteresis model for the ferromagnetic substrate of 2G tapes**Julien Dular<sup>1</sup>, Christophe Geuzaine<sup>1</sup>, Benoît Vanderheyden<sup>1</sup><sup>1</sup>University of Liège, Department of Electrical Engineering and Computer Science, Belgium**1-MP-CC1-S04****Radiation damage mechanisms in coated conductors**Yatir Linden<sup>1</sup>, William Iliffe<sup>1</sup>, Guanze He<sup>1</sup>, Mohsen Danaie<sup>2</sup>, David Fischer<sup>3</sup>, Michael Esterer<sup>3</sup>, Susie Speller<sup>1</sup>, Chris Grovenor<sup>1</sup><sup>1</sup>University of Oxford, United Kingdom<sup>2</sup>Electron Physical Sciences Imaging Centre (ePSIC), United Kingdom<sup>3</sup>Atominstitut, TU Wien, Austria**1-MP-CC1-S05****A new novel nanobond technology to make soldered joints for HTS tapes**Qingbo Zhang<sup>1</sup>, Edward Young<sup>1</sup>, Yifeng Yang<sup>1</sup><sup>1</sup>University of Southampton, United Kingdom

**1-MP-CC1-S06****Preparation and characteristics of superconducting joints of NbTi thin films**Yoshiyuki Yoshida<sup>1</sup>, Hiroshi Takashima<sup>1</sup>, Kazuhiko Tonooka<sup>1</sup>, Mitsuho Furuse<sup>1</sup><sup>1</sup>National Institute of Advanced Industrial Science and Technology (AIST), Japan**1-MP-CC1-S07****YBCO/Conductive-Sr(Ti,Nb)O<sub>3</sub>/Ni/Cu/SS316 Coated Conductor with clean interfaces**Toshiya Doi<sup>1</sup>, Tsuyoshi Hamada<sup>1</sup>, Seiya Inoue<sup>1</sup>, Shigeru Horii<sup>1</sup>, Ataru Ichinose<sup>2</sup><sup>1</sup>Kyoto University, Japan<sup>2</sup>Central Research Institute of Electric Power Industry, Japan**1-MP-CC1-S08****Microstructure of coated conductor with La or Nb-doped SrTiO<sub>3</sub> conductive buffer**Ataru Ichinose<sup>1</sup>, Tsuyoshi Hamada<sup>2</sup>, Seiya Inoue<sup>2</sup>, Shigeru Horii<sup>2</sup>, Toshiya Doi<sup>2</sup><sup>1</sup>Central Research Institute of Electric Power Industry, Japan<sup>2</sup>Kyoto University, Japan**1-MP-CC1-S09****Towards a reliable bridge joint between REBCO coated conductors**Anke Kirchner<sup>1</sup>, Cornelius Nielsch<sup>1</sup>, Ruben Hühne<sup>1</sup><sup>1</sup>IFW Dresden, Institute for Metallic Materials, Germany**1-MP-CC1-S10****Critical Current of REBCO tape from Industrial Manufacturers under Uniaxial Load**Yi Shi<sup>1</sup><sup>1</sup>Institute of Plasma Physics Chinese Academy of Sciences, China**1-MP-CC1-S11****Nucleation and growth of YBCO film on CeO<sub>2</sub>-buffered substrate by FF-MOD toute**Jingyuan Chu<sup>1</sup><sup>1</sup>Shanghai Jiao Tong University, China**1-MP-CC1-S12****Nucleation behaviors of YBCO grown on two technical substrates by FF-MOD Route**Jiangtao Shi<sup>1</sup><sup>1</sup>Shanghai Jiao Tong University, China**1-MP-CC1-S13****Flux pinning anisotropy in YBCO thin films grown on IBAD-MgO based template**Elmeri Rivasto<sup>1</sup>, Mukarram Zaman Khan<sup>1</sup>, Yue Zhao<sup>2</sup>, Chunsheng Chen<sup>3</sup>, Jiamin Zhu<sup>3</sup>, Jussi Tikkainen<sup>4</sup>, Heikki Palonen<sup>4</sup>, Hannu Huhtinen<sup>4</sup>, Petriina Paturi<sup>4</sup><sup>1</sup>Wihuri Physical Laboratory, Department of Physics and Astronomy, University of Turku, University of Turku Graduate School (UTUGS), University of Turku, Finland<sup>2</sup>Department of Electrical Engineering, Shanghai Jiao Tong University, China<sup>3</sup>Shanghai Superconductor Technology Co. Ltd., China<sup>4</sup>Wihuri Physical Laboratory, Department of Physics and Astronomy, University of Turku, Finland

**1-MP-CU - Cuprates**

Chairs: Jasmin Congreve, University of Cambridge and Anna Palau, Institut de Ciencia de Materials de Barcelona (ICMAB-CSIC)

**1-MP-CU-I01****Chemical Solution Deposition of Gd-doped  $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$  films**

Valentina Pinto<sup>1</sup>, Fabrizio Mario Ferrarese<sup>1</sup>, Angelo Vannozzi<sup>1</sup>, Achille Angrisani Armenio<sup>1</sup>, Francesco Rizzo<sup>1</sup>, Andrea Augieri<sup>1</sup>, Antonino Santoni<sup>2</sup>, Flaminia Rondino<sup>2</sup>, Fabio Fabbri<sup>1</sup>, Antonella Mancini<sup>1</sup>, Laura Piperno<sup>3</sup>, Sara Politi<sup>4</sup>, Massimo Tomellini<sup>4</sup>, Silvia Orlanducci<sup>4</sup>, Giuseppe Celentano<sup>1</sup>

<sup>1</sup>Superconductivity Laboratory, FSN-COND, ENEA, Italy

<sup>2</sup>FSN-TECFIS-MNF, ENEA, Italy

<sup>3</sup>Superconductivity Laboratory, FSN-COND, ENEA, Engineering Department, Roma Tre University, Italy

<sup>4</sup>Department of Chemical Sciences and Technologies, Tor Vergata University, Italy

**1-MP-CU-I02****Emulating high-throughput chemical solution deposition of YBCO by PLD**

Lavinia Saltarelli<sup>1</sup>, Max Sieger, Laia Soler<sup>1</sup>, Julia Jareño<sup>1</sup>, Bernat Mundet<sup>1</sup>, Alexander Meledin<sup>2</sup>, Juri Banchewski<sup>1</sup>, Pedro Barusco<sup>1</sup>, Albert Queralto<sup>1</sup>, Adria Pacheco<sup>1</sup>, Joachim Mayer<sup>2</sup>, Xavier Obradors<sup>1</sup>, Teresa Puig<sup>1</sup>

<sup>1</sup>Institut de Ciència de Materials de Barcelona (ICMAB-CSIC), Spain

<sup>2</sup>Gemeinschaftslabor für Elektronenmikroskopie, GFE, RWTH Aachen, Germany

**1-MP-CU-I03****TFA-MOD-grown  $\text{BaHfO}_3$ -REBa<sub>2</sub>Cu<sub>3</sub>O<sub>7-δ</sub> nanocomposite films on buffered Ni-5at%W tapes**

Wolfram Freitag<sup>1</sup>, Manuela Erbe<sup>1</sup>, Pablo Cayado<sup>1</sup>, Martina Falter<sup>2</sup>, Michael Bäcker<sup>2</sup>, Jens Hänißch<sup>1</sup>, Bernhard Holzapfel<sup>1</sup>

<sup>1</sup>Karlsruhe Institute of Technology (KIT), Germany

<sup>2</sup>Deutsche Nanoschicht GmbH, Germany

**1-MP-CU-S04****Strictly application-oriented REBCO bulk fabrication**

Uta Floegel-Delor<sup>1</sup>, Thomas Riedel<sup>1</sup>, Peter Schirrmeister<sup>1</sup>, Rene Koenig<sup>1</sup>, Viktor Kantarbar<sup>1</sup>, Mirko Liebmann<sup>1</sup>, Frank Werfel

<sup>1</sup>Adelwitz Technologiezentrum GmbH, Germany

**1-MP-CU-S05****Fluctuation Induced Conductivity in Welded TSMG YBCO Superconductors**

Seyda Duman<sup>1</sup>, Bakiye Çakır<sup>1</sup>, Alev Aydiner<sup>1</sup>

<sup>1</sup>Karadeniz Technical University, Turkey

**1-MP-CU-S06****Performance enhanced REBa<sub>2</sub>Cu<sub>3</sub>O<sub>x</sub> superconductors by modified growth process**

Xin Yao<sup>1</sup>

<sup>1</sup>School of Physics and Astronomy, Shanghai Jiao Tong University, China

**1-MP-CU-S07****Bulk thickness vs levitation and trapped field of perforated YBCO parts**

Filip Antončík<sup>1</sup>, Michal Lojka<sup>1</sup>, Tomáš Hlásek<sup>2</sup>, Vilém Bartůněk<sup>3</sup>, Ondřej Jankovský<sup>4</sup>

<sup>1</sup>UCT Prague, Department of Inorganic Chemistry, Czech Republic

<sup>2</sup>CAN SUPERCONDUCTORS, Czech Republic

<sup>3</sup>University of Chemistry and Technology, CAN SUPERCONDUCTORS, Czech Republic

<sup>4</sup>University of Chemistry and Technology, Czech Republic

**1-MP-CU-S08****Magnetic Properties of Solution Blow Spun HTS Nanowires in High Magnetic Fields**

Mark Raine<sup>1</sup>, Alexander Pessoa<sup>2</sup>, Rafael Zadorosny<sup>2</sup>, John Durrell<sup>3</sup>, Devendra Namburi<sup>3</sup>,  
Damian Hampshire<sup>1</sup>

<sup>1</sup>European Fusion Energy Reference Laboratory - Metrology of Superconducting Strands. Superconductivity group, Centre for Materials Physics, Department of Physics, Durham University, United Kingdom

<sup>2</sup>Superconductivity and Advanced Materials Group, São Paulo State University (UNESP), Brazil

<sup>3</sup>Superconductivity Group, Department of Engineering, University of Cambridge, United Kingdom

**1-MP-CU-S09****Limitations of REBCO single-domain bulks under gamma and neutron irradiation**

Tomáš Hlásek<sup>1</sup>, Vilém Bartůněk<sup>2</sup>, Ondřej Jankovský<sup>2</sup>, Kryštof Dobrovolný<sup>3</sup>, Ladislav Viererbl<sup>4</sup>

<sup>1</sup>CAN Superconductors, Czech Republic

<sup>2</sup>University of Chemistry and Technology Prague, Department of Inorganic Chemistry, Czech Republic

<sup>3</sup>University of Chemistry and Technology Prague, Department of Power Engineering, Czech Republic

<sup>4</sup>Research Center ŘEŽ, Czech Republic

**1-MP-CU-S10****Fabrication of Superconducting Films using Inkjet Printers**

Gisele Souza<sup>1</sup>, Rafael Zadorosny<sup>2</sup>, Claudio Carvalho<sup>1</sup>

<sup>1</sup>São Paulo State University (UNESP), School of Engineering, Brazil

<sup>2</sup>São Paulo State University (UNESP), School of Engineering, São Paulo State University (UNESP), School of Sciences, Brazil

**1-MP-CU-S11****Biaxial aligned Dy123 by linear-drive type of modulated rotating magnetic field**

Shigeru Horii<sup>1</sup>, Fumiko Kimura<sup>2</sup>, Hayato Kashiwagi<sup>2</sup>, Toshiya Doi<sup>2</sup>

<sup>1</sup>Kyoto University of Advanced Science, Japan

<sup>2</sup>Kyoto University, Japan

**1-MP-CU-S12****Influence of Acetate Method on Superconducting Behavior of (Y/Nd)-123 HTS**

Ana Carolina de Léo<sup>1</sup>, Marcelo Azevedo Neves<sup>2</sup>, Ada López<sup>1</sup>

<sup>1</sup>IFADT (Physics Institute Armando Dias Tavares) - UERJ (University of the State of Rio de Janeiro), Brazil

<sup>2</sup>LMD5 (Laboratory of Materials and Devices with Superconductors) - DFIS (Dept. of Physics) - UFRRJ (Federal Rural University of Rio de Janeiro), Brazil

**1-MP-CU-S13****Flux vortex dynamics in bulk (RE)-Ba-Cu-O superconductors**

Jan Srpcic<sup>1</sup>, Kai Yuan Huang<sup>1</sup>, Dominic Moseley<sup>1</sup>, Devendra Kumar Namburi<sup>1</sup>, Yunhua Shi<sup>1</sup>, Mark Ainslie<sup>1</sup>, Anthony Dennis<sup>1</sup>, Mykhaylo Filipenko<sup>2</sup>, Martin Boll<sup>2</sup>, Archie Campbell<sup>1</sup>, David Cardwell<sup>1</sup>, John Durrell<sup>1</sup>

<sup>1</sup>University of Cambridge, United Kingdom

<sup>2</sup>Siemens AG, Germany

**1-MP-CU-S14****Improvement of Jc(H) on Y/Nd-123 HTS with addition of Nanostructured Zirconia**

Leonardo Picanço Peixoto de Abreu<sup>1</sup>, Marcelo Azevedo Neves<sup>2</sup>, Ana Carolina de Léo<sup>3</sup>

<sup>1</sup>Escola Politécnica - UFRJ (Federal University of Rio de Janeiro), Brazil

<sup>2</sup>LMDS (Laboratory of Materials and Devices with Superconductors) - DFIS (Dept. of Physics) - UFRRJ (Federal Rural University of Rio de Janeiro), Brazil

<sup>3</sup>IFADT (Physics Institute Armando Dias Tavares) - UERJ (University of the State of Rio de Janeiro), Brazil

**1-MP-CU-S15****Comparative study of thermal expansion in High-Tc Superconductors Y-123****& Bi-2212**

Marcelo Azevedo Neves<sup>1</sup>, Artur Jorge da Silva Lopes<sup>1</sup>, João Ricardo Quintal<sup>2</sup>, Ludmila Gabcan<sup>3</sup>, Máximo Ferreira da Silveira<sup>4</sup>

<sup>1</sup>LMDS (Laboratory of Materials and Devices with Superconductors) - DFIS (Dept. of Physics) - UFRRJ (Federal Rural University of Rio de Janeiro), Brazil

<sup>2</sup>Colégio Pedro II / RJ, Brazil

<sup>3</sup>SEEDUC / RJ, Brazil

<sup>4</sup>IF (Physics Institute) - UFRJ (Federal University of Rio de Janeiro), Brazil

**1-MP-CU-S16****Optimizing a new YBCO non-fluorine chemical method using organic additives**

Andrada Daniel<sup>1</sup>, Mircea Nasui<sup>1</sup>, Traian Petrisor<sup>1</sup>, Bianca Mos<sup>1</sup>, Mihai Gabor<sup>1</sup>, Lelia Ciontea<sup>1</sup>, Traian Petrisor<sup>1</sup>

<sup>1</sup>Centre for Superconductivity, Spintronics and Surface Science, Technical University of Cluj-Napoca, Romania

**1-MP-CU-S17****Superconductivity in (Nb,Pb)Sr<sub>2</sub>EuCu<sub>2</sub>O<sub>z</sub> (z~8)**

Toshihiko Maeda<sup>1</sup>, Yoshihiro Yamada<sup>1</sup>, Keisuke Ozaki<sup>1</sup>, Tamon Wada<sup>1</sup>, Ryutaro Koresawa<sup>1</sup>, Taisei Nakamura<sup>1</sup>

<sup>1</sup>Kochi University of Technology, Japan

**1-MP-CU-S18****Magnetizing characteristic evaluation of REBCO bulk in PFM using different yokes**

Kazuya Yokoyama<sup>1</sup>, Tetsuo Oka<sup>2</sup>

<sup>1</sup>Ashikaga University, Japan

<sup>2</sup>Shibaura Institute of Technology, Japan

**1-MP-CU-S19****Novel processing of high performance YBCO superconductors by ultrasonicated****Y211**

Sunsanee Pinmangkorn<sup>1</sup>, Muralidhar Miryala<sup>1</sup>, Sai Srikanth Arvapalli<sup>1</sup>, Masato Murakami<sup>1</sup>

<sup>1</sup>Shibaura Institute of Technology, Japan

**1-MP-CU-S20****Oxygen doping effects in CSD-YBCO nanocomposite film with preformed nanocrystals**

Javier Díez Sierra<sup>1</sup>, Mark Rikel<sup>2</sup>, Hannes Rijckaert<sup>1</sup>, Hannu Huhtinen<sup>3</sup>, Martina Falter<sup>2</sup>, Petriina Paturi<sup>3</sup>, Michael Bäcker<sup>2</sup>, Isabel Van Driessche<sup>1</sup>

<sup>1</sup>Ghent University, Belgium

<sup>2</sup>Deutsche Nanoschicht, Russia

<sup>3</sup>University of Turku, Finland

**1-MP-EP - Electromechanical Properties - HTS**

Chairs: Mark Ainslie, University of Cambridge and Ortensia Dicuonzo, EPFL-SPC

**1-MP-EP-011****Bending Effect on the Transport Performance of Bi-2212 Round Wires**

Zhehua Mao<sup>1</sup>, Jinggang Qin<sup>1</sup>

<sup>1</sup>Institute of Plasma Physics Chinese Academy of Sciences, China

**1-MP-EP-021****Stability analysis of YBCO composite conductor with critical current degradation**

Zhengshuo Zhang<sup>1</sup>, Jinxing Zheng<sup>1</sup>

<sup>1</sup>Institute of Plasma Physics Chinese Academy of Sciences, China

**1-MP-EP-035****Influence of Bending strain on critical current of superconducting tape**

Ming Lei<sup>1</sup>, Tengteng Li<sup>1</sup>, Xinsheng Yang<sup>1</sup>, Wei Chen<sup>1</sup>

<sup>1</sup>Southwest Jiaotong University, China

**1-MP-EP-045****Effect of self-field on the Critical Current of ReBCO Coated Conductors**

Abhinav Kumar<sup>1</sup>

<sup>1</sup>Lovely Professional University, India

**1-MP-EP-055****Spherical harmonic decomposition of the magnetic field between two HTS bulks**

Kévin Berger<sup>1</sup>, Melika Hinaje<sup>1</sup>, Kazuya Higa<sup>2</sup>, Tetsuo Oko<sup>3</sup>, Takashi Nakamura<sup>4</sup>,

Pierre-Louis Marande<sup>5</sup>, Sébastien Leclerc<sup>5</sup>

<sup>1</sup>GREEN - Université de Lorraine, Faculté des Sciences et Technologies, France

<sup>2</sup>Information and Electric Engineering, Niigata University, Japan

<sup>3</sup>Materials Science and Engineering, Shibaura Institute of Technology, Japan

<sup>4</sup>RIKEN, Japan

<sup>5</sup>CRM2, Université de Lorraine/CNRS, France

**1-MP-EP-065****A finite-element approach to investigate flux jumps in bulk superconductors**

Vito Cientanni<sup>1</sup>, Danny Huang<sup>1</sup>, Yunhua Shi<sup>1</sup>, Anthony Dennis<sup>1</sup>, Yeekin Tsui<sup>1</sup>, Mark Ainslie<sup>1</sup>

<sup>1</sup>Bulk Superconductivity Group, Division C, Engineering Department, University of Cambridge, UK



**1-MP-EP-07S****Analysis of mechanical behavior in inhomogeneous HTSs**Haowei Wu<sup>1</sup>, Huadong Yong<sup>1</sup>, Youhe Zhou<sup>1</sup><sup>1</sup>College of Civil Engineering and Mechanics, Lanzhou University, China**1-MP-EP-08S****Influence of local deformation on critical current of HTS tape**Tomáš Kujovič<sup>1</sup>, Fedor Gömöry<sup>1</sup><sup>1</sup>Institute of Electrical Engineering SAS, Slovakia**1-MP-EP-09S****Load characteristics of contactless bearing based on HTSC tape**Igor Rudnev<sup>1</sup>, Dmitriy Abin<sup>1</sup>, Maksim Osipov<sup>1</sup>, Aleksander Starikovskii<sup>1</sup>, Irina Anischenko<sup>1</sup>, Sergey Pokrovskii<sup>1</sup>, Alexsey Podlivaev<sup>1</sup><sup>1</sup>National Research Nuclear University MEPhI, Russia**1-MP-EP-10S****Comparison of properties of a bulk HTS and a stack of HTS tapes after FC and ZFC**Ekaterina Kurbatova<sup>1</sup>, Pavel Kurbatov<sup>1</sup>, Egor Kuschenko<sup>1</sup>, Mikhail Sysoev<sup>1</sup>, Yurii Kulaev<sup>1</sup><sup>1</sup>National Research University, Moscow Power Engineering Institute, Russia**1-MP-EP-11S****Dissipative conductivity in moderately clean superconductors**Yoichi Higashi<sup>1</sup>, Akira Miyazaki<sup>2</sup>, Yasunori Mawatari<sup>1</sup><sup>1</sup>National Institute of Advanced Industrial Science and Technology (AIST), Japan<sup>2</sup>Department of Physics and Astronomy, Uppsala University, Sweden**1-MP-FP2 - Critical Current and Flux Pinning 2**

Chairs: Judy Wu, University of Kansas and Francesco Laviano, Politecnico di Torino

**1-MP-FP2-I01****The enhanced Jc in TFA-MOD (Y,Gd)BCO+BZO films on CeO<sub>2</sub> / R-Al<sub>2</sub>O<sub>3</sub> substrates**Taiki Furuya<sup>1</sup>, Yoshinori Kamada<sup>1</sup>, Keita Sakuma<sup>1</sup>, Masashi Miura<sup>1</sup><sup>1</sup>Seikei University, Japan**1-MP-FP2-I02****Environmentally benign CSD-YBCO nanocomposites with preformed HfO<sub>2</sub> nanocrystals**Hannes Rijckaert<sup>1</sup>, Mika Malmivirta<sup>2</sup>, Nicolas Gauquelain<sup>3</sup>, Sara Bals<sup>3</sup>, Michael Bäcker<sup>4</sup>, Petriina Paturi<sup>2</sup>, Isabel Van Driessche<sup>1</sup><sup>1</sup>SCRIPTS, Ghent University, Belgium<sup>2</sup>University of Turku, Finland<sup>3</sup>EMAT, University of Antwerp, Belgium<sup>4</sup>Deutsche Nanoschicht GmbH, Germany

**1-MP-FP2-I03****Nanostructured Templates for Jc Enhancement in YBa<sub>2</sub>Cu<sub>3</sub>O<sub>7-x</sub> films**

Laura Piperno<sup>1</sup>, Achille Angrisani Armenio<sup>2</sup>, Angelo Vannozzi<sup>2</sup>, Antonella Mancini<sup>2</sup>, Francesco Rizzo<sup>2</sup>, Valentina Pinto<sup>2</sup>, Andrea Augieri<sup>2</sup>, Alessandro Rufoloni<sup>2</sup>, Ramona Mos<sup>3</sup>, Lelia Ciontea<sup>3</sup>, Traian Petrisor<sup>3</sup>, Traian Petrisor Jr<sup>3</sup>, Giovanni Sotgiu<sup>4</sup>, Giuseppe Celentano<sup>2</sup>

<sup>1</sup>Roma Tre University, Engineering Department, Italy

<sup>2</sup>ENEA Frascati Research Centre, Italy

<sup>3</sup>Technical University of Cluj Napoca, Italy

<sup>4</sup>Roma Tre University, Italy

**1-MP-FP2-I04****Increased pinning in REBCO coated conductors grown by liquid-assisted processes.**

John Feighan<sup>1</sup>

<sup>1</sup>University of Cambridge, SuNAM Co. Ltd., United Kingdom

**1-MP-FP2-I05****Improved performances in ZrO<sub>2</sub>-doped CSD-YBCO nanocomposite film via DSD approach**

Pablo Cayado<sup>1</sup>, Hannes Rijckaert<sup>2</sup>, Jonas Billet<sup>2</sup>, Max Sieger<sup>3</sup>, Ruben Huehne<sup>4</sup>, Manuela Erbe<sup>1</sup>, Jens Haenisch<sup>1</sup>, Michael Baecker<sup>5</sup>, Jonathan De Roo<sup>2</sup>, Isabel Van Driessche<sup>2</sup>, Bernard Holzapfel<sup>1</sup>

<sup>1</sup>Karlsruhe Institute of Technology (KIT), Germany

<sup>2</sup>SCRIPTS, Ghent University, Belgium

<sup>3</sup>Institute for Metallic Materials, IFW Dresden, Germany

<sup>4</sup>IFW Dresden, Germany

<sup>5</sup>Deutsche Nanoschicht GmbH, Germany

**1-MP-FP2-S06****The influence of O<sub>2</sub> annealing condition on the in-field Jc of (Y,Gd)BCO + BZO CCs**

Junya Ohta<sup>1</sup>, Kazuki Shimizu<sup>1</sup>, Masashi Miura<sup>1</sup>, Akira Ibi<sup>2</sup>, Koichi Nakaoka<sup>2</sup>, Teruo Izumi<sup>2</sup>

<sup>1</sup>Seikei University, Japan

<sup>2</sup>AIST, Japan

**1-MP-FP2-S07****High Jc TFA-MOD-(Y0.77Gd0.23)Ba<sub>2</sub>Cu<sub>3</sub>O<sub>y</sub> films on CeO<sub>2</sub> buffered R-Al<sub>2</sub>O<sub>3</sub> substrates**

Keita Sakuma<sup>1</sup>, Yoshinori Kamada<sup>1</sup>, Masashi Miura<sup>1</sup>

<sup>1</sup>Seikei University, Japan

**1-MP-FP2-S08****The influence of BaHfO<sub>3</sub> nanorods on the in-field Jc for RTR-PLD EuBa<sub>2</sub>Cu<sub>3</sub>O<sub>y</sub> CCs**

Kenji Miyata<sup>1</sup>, Shuji Anno<sup>1</sup>, Jun Nishimura<sup>1</sup>, Masashi Miura<sup>1</sup>, Akira Ibi<sup>2</sup>, Teruo Izumi<sup>2</sup>

<sup>1</sup>Seikei University, Japan

<sup>2</sup>AIST, Japan

**1-MP-FP2-S09****The epitaxial growth of high-Jc GdBCO films with Co doping by non-fluorine CSD**

Zhengjian Tian<sup>1</sup>, Wentao Wang<sup>2</sup>, Lian Liu<sup>3</sup>, Baolei Huo<sup>1</sup>, Xue Yang<sup>1</sup>, Gansong Yang<sup>1</sup>, Mingjiang Wang<sup>4</sup>, Yong Zhao<sup>5</sup>

<sup>1</sup>Key Laboratory of Advanced Technologies of Materials (Ministry of Education of China), School of Materials Science and Engineering, Southwest Jiaotong University, China

<sup>2</sup>Key Laboratory of Magnetic Levitation and Maglev Trains (Ministry of Education of China), Southwest Jiaotong University, Key Laboratory of Advanced Technologies of Materials (Ministry of Education of China), School of Materials Science and Engineering, Sou, China

<sup>3</sup>Key Laboratory of Magnetic Levitation and Maglev Trains (Ministry of Education of China), School of Electrical Engineering, Southwest Jiaotong University, Key Laboratory of Advanced Technologies of Materials (Ministry of Education of China), School of Mat, China

<sup>4</sup>Key Laboratory of Magnetic Levitation and Maglev Trains (Ministry of Education of China), School of Electrical Engineering, Southwest Jiaotong University, China

<sup>5</sup>College of Physics and Energy, Fujian Normal University, Key Laboratory of Magnetic Levitation and Maglev Trains (Ministry of Education of China), School of Electrical Engineering, Southwest Jiaotong University, China

**1-MP-FP2-S10****Tunable BaMO<sub>3</sub> (M= Ti, Zr and Hf) Nps used on CSD approach to YBa<sub>2</sub>Cu<sub>3</sub>O<sub>7</sub> layers**

Susagna Ricart<sup>1</sup>, Natalia Chamorro<sup>2</sup>, Diana Garcia<sup>3</sup>, Julia Jareño<sup>1</sup>, Cornelia Pop<sup>1</sup>, Juri Banchewski<sup>1</sup>, Josep Ros<sup>2</sup>, Ramon Yañez<sup>2</sup>, Anna Palau<sup>1</sup>, Xavier Obradors<sup>1</sup>, Teresa Puig<sup>1</sup>

<sup>1</sup>ICMAB-CSIC, Spain

<sup>2</sup>UAB, Spain

<sup>3</sup>ICMAB-CSIC, UAB, Spain

**1-MP-FP2-S11****Flux pinning in BaHfO<sub>3</sub> and Ba<sub>2</sub>Gd(Nb, Ta)O<sub>6</sub> nanocomposite GdBa<sub>2</sub>Cu<sub>3</sub>O<sub>7</sub> thin films**

Ruslan Popov<sup>1</sup>, Kai Ackermann<sup>1</sup>, Bernhard Holzapfel<sup>1</sup>, Jens Hänisch<sup>1</sup>

<sup>1</sup>Karlsruhe Institute of Technology (KIT), Institute for Technical Physics, Germany

**1-MP-FP2-S12****Magnetic vortex pinning effects of Cobalt nanodots deposited on YBa<sub>2</sub>Cu<sub>3</sub>O<sub>7</sub> films**

Traian Petrisor Jr.<sup>1</sup>, Mihai Sebastian Gabor<sup>1</sup>, Mircea Nasui<sup>1</sup>, Ramona Bianca Mos<sup>1</sup>, Adrian Dinescu<sup>2</sup>, Andrea Augieri<sup>3</sup>, Giuseppe Celentano<sup>3</sup>, Lelia Ciontea<sup>1</sup>, Traian Petrisor<sup>4</sup>

<sup>1</sup>Centre for Superconductivity, Spintronics and Surface Science, Physics and Chemistry Department, Technical University of Cluj-Napoca, Romania

<sup>2</sup>National Institute for Research and Development in Microtechnologies, Romania

<sup>3</sup>ENEA Frascati Research Centre, Italy

<sup>4</sup>Centre for Superconductivity, Spintronics and Surface Science, Technical University of Cluj-Napoca, Romania

**1-MP-FP2-S13****REBCO HTS Wires on Thinner Hastelloy Substrates – Performance and Properties**

Yifei Zhang<sup>1</sup>, Aarthi Sundaram<sup>1</sup>, Satoshi Yamano<sup>1</sup>, Allan Knoll<sup>1</sup>, Shinya Yasunaga<sup>1</sup>, Gene Carota<sup>1</sup>, Paul Brownsey<sup>1</sup>, Drew Hazelton<sup>1</sup>, Toru Fukushima<sup>1</sup>

<sup>1</sup>SuperPower Inc., United States of America

**1-MP-FP2-S14****Increase of critical currents by Mo substitution for YBaCuO single crystals**

Anton Los<sup>1</sup>, Bogdan Dabrowski<sup>2</sup>, Krzysztof Rogacki<sup>1</sup>

<sup>1</sup>Institute of Low Temperature and Structure Research, Poland

<sup>2</sup>Physics Department, Northern Illinois University, United States of America

**1-MP-FP2-S15****New line of SuperOx 2G HTS wires with improved critical current and flux pinning**

Valery Petrykin<sup>1</sup>, Marat Gaifullin<sup>1</sup>, Maki Okube<sup>1</sup>, Naoyuki Hirata<sup>1</sup>, Vladimir Vyatkin<sup>1</sup>,

Miyuki Nakamura<sup>1</sup>, Juhyun Chung<sup>1</sup>, Sergey Lee<sup>1</sup>, Alexander Molodyk<sup>2</sup>, Sergey

Samoilenkov<sup>2</sup>, Tatsu Okada<sup>3</sup>, Satoshi Awaji<sup>3</sup>

<sup>1</sup>SuperOx Japan LLC, Japan

<sup>2</sup>SuperOx, Russia

<sup>3</sup>Tohoku University, Japan

**1-MP-FP2-S16****Improved in-field superconducting properties by clustered atom-replaced pins**

Takeshi Araki<sup>1</sup>, Mariko Hayashi<sup>2</sup>, Hirotaka Ishii<sup>2</sup>, Daisaku Yokoe<sup>3</sup>, Ryuji Yoshida<sup>3</sup>, Takeharu

Kato<sup>3</sup>, Gen Nishijima<sup>4</sup>, Akiyoshi Matsumoto<sup>4</sup>

<sup>1</sup>Toshiba Corporation, Japan

<sup>2</sup>Corporate Research and Development Center, Toshiba Corporation, Japan

<sup>3</sup>Nanostructures Research Laboratory, Japan Fine Ceramics Center, Japan

<sup>4</sup>Research Center for Functional Materials, National Institute for Materials Science, Japan

**1-MP-FP2-S17****Large scale defects for pinning modification of YBCO thin films**

Antony Jones<sup>1</sup>, Simon KH Lam<sup>2</sup>, Jia Du<sup>2</sup>, Alexey V Pan<sup>3</sup>

<sup>1</sup>University of Wollongong, CSIRO Manufacturing, Australia

<sup>2</sup>CSIRO Manufacturing, Australia

<sup>3</sup>University of Wollongong, Australia

**1-MP-FP2-S18****Systematic study of RE ion size variance on pinning at high fields at <30K**

May Hsim Lai<sup>1</sup>

<sup>1</sup>University of Cambridge, SuNAM Co. Ltd, United Kingdom

**1-MP-SPR - Superconducting Materials Properties**

Chairs: Simon Hopkins, European Organization for Nuclear Research (CERN) and Jan Srpcic, University of Cambridge

**1-MP-SPR-I01****Fabrication and characterizations of superconducting magnetic shield by C.C.**

Takato Machi<sup>1</sup>, Akira Ibi<sup>1</sup>, Teruo Izumi<sup>1</sup>

<sup>1</sup>National Institute of Advanced Industrial Science and Technology (AIST), Japan

**1-MP-SPR-S02****Lattice dynamics in REBCO superconductors probed by synchrotron XPCS**

Andrea Augieri<sup>1</sup>, Francesco Rizzo<sup>1</sup>, Mario Reiser<sup>2</sup>, Alessandro Ricci<sup>3</sup>, Fabio Fabbri<sup>1</sup>, Antonella Mancini<sup>1</sup>, Valentina Pinto<sup>1</sup>, Achille Angrisani Armenio<sup>1</sup>, Angelo Vannozzi<sup>1</sup>, Alessandro Rufoloni<sup>1</sup>, Laura Piperno<sup>4</sup>, Andrea Masi<sup>4</sup>, Giuseppe Celentano<sup>1</sup>, Gaetano Campi<sup>5</sup>

<sup>1</sup>ENEA Frascati Research Centre, Italy

<sup>2</sup>European XFEL, Holzkoppel 4, 22869 Schenefeld Germany, Germany

<sup>3</sup>Rome International Center for Materials Science, RICMASS, via dei Sabelli 119A, I-00185 Roma, Deutsches Elektronen-Synchrotron DESY, Notkestraße 85, D-22607 Hamburg, Germany, Italy

<sup>4</sup>Roma Tre University, Engineering Department, Italy

<sup>5</sup>CNR - National Research Council, Institute of Crystallography, Italy

**1-MP-SPR-S03****Transport current distribution in soldered joint of BSCCO and REBCO tapes**

Noriko Chikumoto<sup>1</sup>, Satarou Yamaguchi<sup>2</sup>, Oleg Shyshkin<sup>3</sup>

<sup>1</sup>Center of Applied Superconductivity and Sustainable Energy Research, Japan

<sup>2</sup>Center of Applied Superconductivity and Sustainable Energy Research, Chubu University, Japan

<sup>3</sup>V.N.Karazin Kharkiv National University, Ukraine

**1-MP-SPR-I04****Design and construction of a torque magnetometer for large size superconductors**

Sébastien Brialmont<sup>1</sup>, Jean-François Fagnard<sup>1</sup>, Philippe Vanderbemden<sup>1</sup>

<sup>1</sup>Montefiore institute - University of Liège, Belgium

**1-MP-SPR-S05****Analysis of an electromagnetic method to measure AC losses in HTS tapes**

Marco Breschi<sup>1</sup>, Fabio Filicori<sup>1</sup>, Andrea Musso<sup>1</sup>, Gaetano Pasini<sup>1</sup>

<sup>1</sup>Department of Electrical, Electronic and Information Engineering, University of Bologna, Italy

**1-MP-SPR-S06****Nanometer scale point contact spectroscopy achieved via resistive switching**

Mária Dvoranová<sup>1</sup>, Tomáš Pleceník<sup>1</sup>, Martin Moško<sup>1</sup>, Marek Vidiš<sup>1</sup>, Maroš Gregor<sup>1</sup>, Tomáš Roch<sup>1</sup>, Branislav Grancič<sup>1</sup>, Leonid Satrapinskyy<sup>1</sup>, Peter Kúš<sup>1</sup>, Andrej Pleceník<sup>1</sup>

<sup>1</sup>Department of Experimental Physics, Faculty of Mathematics, Physics and Informatics, Comenius University in Bratislava, Slovakia

**1-MP-SPR-S07****System integration and commissioning of cryogenic mass flow meter WEKASENSE**

Miralem Okanovic<sup>1</sup>, Pascal Erni<sup>1</sup>, Michael Börsch<sup>1</sup>, Johannes Drache<sup>1</sup>, Umberto Gambardella<sup>2</sup>, Domenico D'Agostino<sup>2</sup>, Gerardo Iannone<sup>2</sup>

<sup>1</sup>WEKA AG, Switzerland

<sup>2</sup>INFN - Istituto Nazionale di Fisica Nucleare, Italy

**1-MP-SPR-I08****Joining condition dependency of joint resistance in UW of HTS tapes with indium**

Satoshi Ito<sup>1</sup>, Ryoichiro Hayasaka<sup>1</sup>, Yutaka S. Sato<sup>2</sup>, Hidetoshi Hashizume<sup>1</sup>

<sup>1</sup>Department of Quantum Science and Energy Engineering, Graduate School of Engineering, Tohoku University, Japan

<sup>2</sup>Department of Materials Processing, Graduate School of Engineering, Tohoku University, Japan

**1-MP-SPR-S09****Ultrafast kinematic vortices in mesoscopic superconductors: self-field effects**

Alexssandre de Oliveira Junior<sup>1</sup>, Alice Presotto<sup>2</sup>, Leonardo Cadormi<sup>2</sup>, Rafael Zadorosny<sup>2</sup>, Edson Sardella<sup>2</sup>

<sup>1</sup>UNICAMP - Campinas State University, Brazil

<sup>2</sup>UNESP - São Paulo State University, Brazil

**1-MP-SPR-S10****Impact of non-uniform inductance on parallel HTS tapes current distribution**

Sriharsha Venuturumilli<sup>1</sup>, Min Zhang<sup>1</sup>, Weijia Yuan<sup>1</sup>

<sup>1</sup>University of Strathclyde, United Kingdom

**1-MP-SPR-S11****Characterization of AlMn Alloys Superconducting Film**

Wentao Wu<sup>1</sup>, Yue Lv<sup>2</sup>, Jianguo Chen<sup>2</sup>, Hubing Wang<sup>2</sup>, Bo Gao<sup>2</sup>, Zhen Wang<sup>2</sup>

<sup>1</sup>Shanghai Institute of Microsystem and Information Technology (SIMIT), Chinese Academy of Sciences, CAS Center for Excellence in Superconducting Electronics (CENSE), bState Key Laboratory of Functional Materials for Informatics, Shanghai Institute of Micro, China

<sup>2</sup>Shanghai Institute of Microsystem and Information Technology (SIMIT), Chinese Academy of Sciences, China

**1-MP-SPR-S12****Magnetic field penetration experiment**

Daniel Turner<sup>1</sup>, Graeme Burt<sup>2</sup>, Tobias Junginger<sup>3</sup>, Oleg Malyshev<sup>4</sup>

<sup>1</sup>Cockcroft institute - Daresbury Laboratory, Lancaster Engineering Department, United Kingdom

<sup>2</sup>Daresbury Laboratory, Lancaster Engineering Department, United Kingdom

<sup>3</sup>Lancaster University, United Kingdom

<sup>4</sup>Daresbury Laboratory, United Kingdom

**1-MP-SPR-S13****Residual strain in composite superconductors**

Christian Scheuerlein<sup>1</sup>, Mark Rikel<sup>2</sup>, Michael Hofmann<sup>3</sup>, Najib Cheggour<sup>4</sup>

<sup>1</sup>CERN, Switzerland

<sup>2</sup>Deutsche Nanoschicht GmbH, Germany

<sup>3</sup>Forschungsneutronenquelle Heinz Maier-Leibnitz (FRM II), TU München, Germany

<sup>4</sup>Applied Superconductivity Center, National High Magnetic Field Laboratory, Florida State University, United States of America

**1-MP-SPR-S14****Oxygen in superconductors**

Sergei Obukhov<sup>1</sup>

<sup>1</sup>A.F.Ioffe PTI Saint Petersburg, Russia

**1-MP-SPR-S15****The effects of high energy milling on Ba122 polycrystalline bulks**

Shinnosuke Tokuta<sup>1</sup>, Akiyasu Yamamoto<sup>1</sup>, Yusuke Shimada<sup>2</sup>, Satoshi Hata<sup>3</sup>

<sup>1</sup>Tokyo University of Agriculture and Technology, JST-CREST, Japan

<sup>2</sup>Tohoku University, JST-CREST, Japan

<sup>3</sup>Kyushu University, JST-CREST, Japan

**1-MP-SPR-S16****Magnetic field dynamics inside a thin-walled superconducting tube**Vilius Vertelis<sup>1</sup>, Saulius Balevicius<sup>2</sup>, Markus Schneider<sup>3</sup><sup>1</sup>French-German Research Institute of Saint-Louis, France, Center for Physical Sciences and Technology, Lithuania<sup>2</sup>Center for Physical Sciences and Technology, Lithuania<sup>3</sup>French-German Research Institute of Saint-Louis, Germany**1-MP-SPR-S17****Electro-mechanical properties of high temperature superconducting tapes**Oleg Kirichek<sup>1</sup>, Marat Gaifullin<sup>2</sup>, Sergey Lee<sup>2</sup>, Joe Kelleher<sup>1</sup>, Beth Evans<sup>1</sup>, Maksym Myronov<sup>3</sup>, Richard Down<sup>1</sup><sup>1</sup>ISIS, STFC, Rutherford Appleton Laboratory, United Kingdom<sup>2</sup>SuperOx Japan LLC, Japan<sup>3</sup>Department of Physics, The University of Warwick, United Kingdom**1-MP-SPR-S18****Additional AC loss of three-strand parallel conductors composed of REBCO tapes**Shun Miura<sup>1</sup>, Takuma Furukawa<sup>1</sup>, Masataka Iwakuma<sup>1</sup><sup>1</sup>Kyushu University, Japan**1-MP-SPR-S19****A study of AC loss of CICC by comparative calculation**Yuxiang He<sup>1</sup>, Jinggang Qin<sup>2</sup><sup>1</sup>Institute of Plasma Physics Chinese Academy of Sciences, University of Science and Technology of China, China<sup>2</sup>Institute of Plasma Physics Chinese Academy of Sciences, China**1-MP-SPR-S20****Thermo-mechanical inspection of a superconducting coil using DIC down to 20 K**Wendell Bailey<sup>1</sup><sup>1</sup>University of Southampton, United Kingdom

1530-1615 Refreshments &amp; Exhibition

HALLS 1 &amp; 2

**Oral Session 2**

1615-1815

1615-1815 **1-EO-NW - Nanowire Detectors**

ROOM: CLYDE AUDITORIUM

Chairs: Döndü Sahin, University of Bristol and  
 Alexander Korneev, Moscow Institute of Physics  
 and Technology (State University)

1615	<b>1-EO-NW-011</b> <b>YBCO nanowires for fundamental studies and single photon detector applications</b> <u>Floriana Lombardi</u>  <sup>1</sup> Quantum Device Physics Laboratory, Department of Microtechnology and Nanoscience, Chalmers University of Technology, Sweden
1645	<b>1-EO-NW-02S</b> <b>Demonstration of NbTiN SNSPD array with reduced readout lines</b> <u>Shigehito Miki</u> <sup>1</sup> , Masahiro Yabuno <sup>1</sup> , Shigeyuki Miyajima <sup>1</sup> , Hirotaka Terai <sup>1</sup>  <sup>1</sup> National Institute of Information and Communications Technology, Japan
1700	<b>1-EO-NW-03S</b> <b>Hot-spot correlation length for SNSPDs with near-unity detection efficiency</b> <u>Gregory Gotsman</u> <sup>1</sup> , Margaret Polyakova <sup>1</sup> , Alexander Semenov <sup>1</sup> , Vadim Kovalyuk <sup>1</sup> , Simone Ferrari <sup>2</sup> , Wolfram Pernice <sup>2</sup>  <sup>1</sup> Moscow State Pedagogical University, Russia <sup>2</sup> University of Munster, Germany
1715	<b>1-EO-NW-04S</b> <b>Supercontinuum single photon detector using multilayer superconducting nanowires</b> <u>Hao Li</u> <sup>1</sup> , Yong Wang <sup>1</sup> , Lixing You <sup>1</sup> , Weijun Zhang <sup>1</sup> , Zhen Wang <sup>1</sup>  <sup>1</sup> Shanghai Institute of Microsystem and Information Technology (SIMIT), Chinese Academy of Sciences,
1730	<b>1-EO-NW-05S</b> <b>Statistics of dark and photon counts in current-carrying superconducting strips</b> <u>Alexej Semenov</u> <sup>1</sup> , Mariia Sidorova <sup>1</sup> , Artem Kuzmin <sup>2</sup> , Steffen Doerner <sup>2</sup> , Konstantin Ilin <sup>2</sup> , Michael Siegel <sup>2</sup>  <sup>1</sup> DLR Institute of Optical Systems, Germany <sup>2</sup> Institute of Micro and Nanoelectronic Systems, Karlsruhe Institute of Technology, Germany
1745	<b>1-EO-NW-06S</b> <b>Superconducting detectors fabricated using precision dislocation engineering</b> <u>Ilya Charaev</u> <sup>1</sup> , Glenn Martinez <sup>1</sup> , Andrew Dane <sup>1</sup> , Reza Baghdadi <sup>1</sup> , Marco Colangelo <sup>1</sup> , Karl K. Berggren <sup>1</sup>  <sup>1</sup> Massachusetts Institute of Technology, United States of America
1800	<b>1-EO-NW-07S</b> <b>NbN and MgB<sub>2</sub> SNSPDs: a comparative study</b> <u>Sergey Cherednichenko</u> <sup>1</sup>  <sup>1</sup> Chalmers University of Technology, Sweden

1615-1815	<b>1-MO-SCC - Industrial Developments in Coated Conductors [SPECIAL SESSION]</b>	ROOM: FORTH
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Chairs: Xavier Obradors, ICMAB Barcelona  
and Venkat Selvamanickam, University of Houston

1615

**1-MO-SCC-01S****Long length, high performance HTS coated conductors for ultra-high fields**Ulrich Betz<sup>1</sup>, Claus Schoellhorn<sup>1</sup>, Sonja Noll-Baumann<sup>1</sup>, Alexander Usoskin<sup>1</sup>, Klaus Schlenge<sup>1</sup><sup>1</sup>Bruker HTS GmbH, Germany

1630

**1-MO-SCC-02S****Industrial scale 40mm production technology at Deutsche Nanoschicht**Michael Baecker<sup>1</sup>, Ron Feenstra<sup>1</sup>, Mariusz Mosiadz<sup>1</sup>, Brygida Wojtyniak<sup>1</sup>, Jan Kunert<sup>1</sup>, Oliver Brunkahl<sup>1</sup>, Mark Rikel<sup>1</sup>, Martina Falter<sup>1</sup>, Mario Sadewasser<sup>1</sup><sup>1</sup>Deutsche Nanoschicht GmbH, Germany

1645

**1-MO-SCC-03S****Recent progress of 2G HTS wires at Fujikura**Masanori Daibo<sup>1</sup>, Shinji Fujita<sup>1</sup>, Yutaka Adachi<sup>1</sup>, Kazuomi Kakimoto<sup>1</sup>, Wataru Hirata<sup>1</sup>, Yasuhiro Iijima<sup>1</sup><sup>1</sup>Fujikura Ltd., Japan

1700

**1-MO-SCC-04S****Progress in Mass-production and R&D for 2G HTS Wires in Shanghai Superconductor**Guangyu Jiang<sup>1</sup>, Yue Zhao<sup>2</sup>, J. M. Zhu<sup>2</sup>, C. S. Chen<sup>1</sup>, W. Wu<sup>2</sup>, Z. W. Zhang<sup>2</sup>, S. K. Chen<sup>1</sup>, Z. YHong<sup>2</sup>, Z. J. Jin<sup>3</sup>, Y. Yamada<sup>1</sup><sup>1</sup>Shanghai Superconductor Company, China<sup>2</sup>Shanghai Superconductor Company, Shanghai Jiao Tong University, China<sup>3</sup>Shanghai Jiao Tong University, China

1715

**1-MO-SCC-05S****Present Directions for 2G HTS Wire Development at SuperOx**Alexander Molodyk<sup>1</sup>, Alexey Mankevich<sup>1</sup>, Anton Markelov<sup>1</sup>, Valery Petrykin<sup>2</sup>, Sergey Lee<sup>2</sup>, Svetlana Martynova<sup>1</sup>, Sergey Samoilnekov<sup>1</sup><sup>1</sup>SuperOx, Russia<sup>2</sup>SuperOx Japan LLC, Japan

1730

**1-MO-SCC-06S****Progress of 2G HTS (RE)BCO Conductor Development at SuperPower**Drew Hazelton<sup>1</sup><sup>1</sup>SuperPower Inc., United States of America

1745	<b>1-MO-SCC-07S</b> <b>2G HTS Coated Conductors: Process Control Improvements at STI</b> <u>Jeong-Uk Huh</u> <sup>1</sup> , Joseph Chase <sup>1</sup> , Daniel DeLeon <sup>1</sup> , Marco Mosri <sup>1</sup> , Clay Sakowitz <sup>1</sup> , Ken Pfeiffer <sup>1</sup> <sup>1</sup> Superconductor Technologies Inc, United States of America	
1800	<b>1-MO-SCC-08S</b> <b>Recent improvements of ReBCO wire production at THEVA</b> <u>Werner Prusseit</u> <sup>1</sup> , Markus Bauer <sup>1</sup> , Veit Große <sup>1</sup> , Markus Bendele <sup>1</sup> <sup>1</sup> THEVA Dünnschichttechnik GmbH, Germany	
1615-1815	<b>1-MO-BK1 - Bulk materials 1</b>	ROOM: GALA
	Chairs: Hiroyuki Fujishiro, Iwate University and David Cardwell, University of Cambridge	
1615	<b>1-MO-BK1-01I</b> <b>A Hybrid Trapped Field Magnet Lens (HTFML): concept and realization</b> <u>Hiroyuki Fujishiro</u> <sup>1</sup> , Mark Ainslie <sup>2</sup> , Sora Namba <sup>1</sup> , Tomoyuki Naito <sup>1</sup> , Keita Takahashi <sup>1</sup> , Difan Zhou <sup>3</sup> <sup>1</sup> Department of Physical Science and Materials Engineering, Faculty of Science and Engineering, Iwate University, Japan <sup>2</sup> Bulk Superconductivity Group, Department of Engineering, University of Cambridge, United Kingdom <sup>3</sup> Department of Physics, Shanghai University, China	
1645	<b>1-MO-BK1-02S</b> <b>Effect of Gd-211 on superconducting properties of GdBCO on a macro &amp; micro-scale</b> <u>Devendra Kumar Namburi</u> <sup>1</sup> , Yunhua Shi <sup>2</sup> , Kai Yuan Huang <sup>2</sup> , Mark D Ainslie <sup>2</sup> , Jan Srpčić <sup>2</sup> , Anthony R Dennis <sup>2</sup> , David A Cardwell <sup>2</sup> , John H Durrell <sup>2</sup> <sup>1</sup> University of Cambridge, United Kingdom <sup>2</sup> Department of Engineering, University of Cambridge, United Kingdom	
1700	<b>1-MO-BK1-03S</b> <b>Stoichiometry inhomogeneity and intergrain connectivity in K-doped Ba122 bulks</b> <u>Fumitake Kametani</u> <sup>1</sup> , Yi-Feng Su <sup>1</sup> , Chongin Pak <sup>1</sup> , Shah Alam Limon <sup>1</sup> , Chiara Tarantini <sup>1</sup> , Eric Hellstrom <sup>1</sup> , David Larbalestier <sup>1</sup> <sup>1</sup> Florida State University, National High Magnetic Field Laboratory, United States of America	

1715

**1-MO-BK1-04S****Cross-field demagnetization of 2G HTS stacks for high number of cycles**

Anang Dadhich<sup>1</sup>, Milan Kapolka<sup>1</sup>, Enric Pardo<sup>1</sup>, Vicente Climente-Alarcon<sup>2</sup>, Anis Smara<sup>2</sup>, Nikolay Mineev<sup>2</sup>, Lukasz Tomkow<sup>2</sup>, Bartek A Glowacki<sup>2</sup>, Francesco Grilli<sup>3</sup>

<sup>1</sup>Institute of Electrical Engineering, Slovak Academy of Sciences, Slovakia

<sup>2</sup>Department of Materials Science and Metallurgy, University of Cambridge, United Kingdom

<sup>3</sup>Karlsruhe Institute of Technology (KIT), Germany

1730

**1-MO-BK1-05S****Engineering a nano-scale dispersion of artificial pinning centres in MgB<sub>2</sub> bulks**

Guillaume Matthews<sup>1</sup>, Sajjad Amirkhanlou<sup>1</sup>, Timothy Davies<sup>1</sup>, Laura Wheatley<sup>1</sup>, Chris Grovenor<sup>1</sup>, Susannah Speller<sup>1</sup>

<sup>1</sup>University of Oxford, United Kingdom

1745

**1-MO-BK1-06S****High field superconductivity in C-doped MgB<sub>2</sub> prepared by a rapid synthesis route**

Davide Matera<sup>1</sup>, Marco Bonura<sup>1</sup>, Florin Buta<sup>1</sup>, David Leboeuf<sup>2</sup>, Radovan Cerny<sup>1</sup>, Enrico Giannini<sup>1</sup>, Carmine Senatore<sup>1</sup>

<sup>1</sup>DQMP, University of Geneva, Switzerland

<sup>2</sup>French National High Magnetic Field Laboratory (LNCMI), France

1800

**1-MO-BK1-07S****Trapped field properties of single domain GdBCO bulk and ring superconductors**

Wanmin Yang<sup>1</sup>

<sup>1</sup>Department of Physics, Shaanxi Normal University, Xi'an, China

**1615-1815 1-LO-SFC - Superconducting FCL**

ROOM: CARRON

Chairs: Jie Sheng, Shanghai Jiao Tong University  
and Pascal Tixador, Université Grenoble Alpes – CNRS Grenoble INP

1615

**1-LO-SFC-01I****Tests of a 10 kV 10 kA DC Resistive Type Superconducting Fault Current Limiter**

Bin Xiang<sup>1</sup>, Lei Gao<sup>1</sup>, Zhiyuan Liu<sup>1</sup>, Yingsan Geng<sup>1</sup>, Jianhua Wang<sup>1</sup>, Satoru Yanabu<sup>1</sup>

<sup>1</sup>Xi'an Jiaotong University, China

1645

**1-LO-SFC-02S****Design and Testing a 160 kV/ 1 kA DC Superconducting Fault Current Limiter**

Shaotao Dai<sup>1</sup>, Tao Ma<sup>1</sup>, Lei Hu<sup>1</sup>, Bangzhu Wang<sup>1</sup>, Teng Zhang<sup>1</sup>

<sup>1</sup>Beijing Jiaotong University, China

1700	<b>1-LO-SFC-03S</b> <b>Development of 150 V/m HTS conductor for fault current limitation</b> <u>Guillaume Escamez</u> <sup>1</sup> , Alexandre Zampa <sup>2</sup> , Christian Eric Bruzek <sup>1</sup> , Veit Grosse <sup>3</sup> , Bertrand Dutoit <sup>4</sup> , Frédéric Sirois <sup>5</sup> , Christian Lacroix <sup>5</sup> , Markus Bauer <sup>3</sup> , Pascal Tixador <sup>2</sup> <sup>1</sup> Supergrid Institute, France <sup>2</sup> Université Grenoble Alpes, France <sup>3</sup> THEVA GmbH, Germany <sup>4</sup> EPFL, France <sup>5</sup> Polytechnique Montreal, Canada
1715	<b>1-LO-SFC-04S</b> <b>Development of SFCL for a Four-terminal <math>\pm 160\text{kV}</math> MMC-HVDC Network</b> <u>Chao Yang</u> <sup>1</sup> , Ziqiang Wei <sup>1</sup> , Ying Xin <sup>1</sup> , Leishi Xiao <sup>2</sup> , Chao Sheng <sup>2</sup> <sup>1</sup> School of Electrical and Information Engineering, Tianjin University, China <sup>2</sup> Electric Power Research Institute of Guangdong Power Grid Company, China
1730	<b>1-LO-SFC-05S</b> <b>Current flow diverted coated conductors for advanced fault current limiters</b> <u>Pedro Barusco</u> <sup>1</sup> , Xavier Granados <sup>1</sup> , Christian Lacroix <sup>2</sup> , Frédéric Sirois <sup>2</sup> , Roxana Vlad <sup>3</sup> , Alberto Calleja <sup>3</sup> , Veit Grosse <sup>4</sup> , Markus Bauer <sup>4</sup> , Roland Gyuráki <sup>5</sup> , Mathias Noe <sup>5</sup> , Xavier Obradors <sup>1</sup> , Teresa Puig <sup>1</sup> <sup>1</sup> Institut de Ciència de Materials de Barcelona (ICMAB-CSIC), Spain <sup>2</sup> Polytechnique Montréal, Canada <sup>3</sup> Oxolutia SL, Spain <sup>4</sup> THEVA GmbH, Germany <sup>5</sup> KIT - Institute for Technical Physics (ITEP), Germany
1745	<b>1-LO-SFC-06S</b> <b>Recovery Performance of Partially-Joined Porous-Stabilized REBCO Tape for RFCL</b> <u>Kohei Yuki</u> <sup>1</sup> , Satoshi Ito <sup>1</sup> , Hidetoshi Hashizume <sup>1</sup> <sup>1</sup> Department of Quantum Science and Energy Engineering, Graduate School of Engineering, Tohoku University, Japan
1800	<b>1-LO-SFC-07S</b> <b>Fault Current Limitation Coordination of Multiple SFCLs in IEEE 14-Bus System</b> <u>Naoki Hayakawa</u> <sup>1</sup> , Yuji Mori <sup>1</sup> , Hiroki Kojima <sup>1</sup> <sup>1</sup> Nagoya University, Japan

1615-1815 **1-LO-AM1 - Accelerator Magnets 1**

ROOM: DOCHART

Chairs: Luca Bottura, CERN and Nikolay Bykovskiy, CERN

1615

**1-LO-AM1-01I****Recent progress on CORC® cable, wire and magnet development**

Danko van der Laan<sup>1</sup>, Jeremy Weiss<sup>1</sup>, Drew Hazelton<sup>2</sup>, Tim Mulder<sup>3</sup>, Herman ten Kate<sup>3</sup>, Xiaorong Wang<sup>4</sup>, Hugh Higley<sup>4</sup>, Soren Prestemon<sup>4</sup>, Ramesh Gupta<sup>5</sup>, Dima Abraimov<sup>6</sup>

<sup>1</sup>Advanced Conductor Technologies, University of Colorado, United States of America

<sup>2</sup>SuperPower Inc., United States of America

<sup>3</sup>CERN, Switzerland

<sup>4</sup>Lawrence Berkeley National Laboratory, United States of America

<sup>5</sup>Brookhaven National Laboratory, <sup>6</sup>Brookhaven National Laboratory

<sup>6</sup>ASC-NHMFL, United States of America

1645

**1-LO-AM1-02S****Characterisation of high current density REBCO tape of the H2020-ARIES program**

Lucio Rossi<sup>1</sup>, Ulrich Betz<sup>2</sup>, Carmine Senatore<sup>3</sup>, Alexander Usoskin<sup>2</sup>, Luca Bottura<sup>1</sup>

<sup>1</sup>CERN, Switzerland

<sup>2</sup>Bruker HTS GmbH, Germany

<sup>3</sup>University of Geneva, Switzerland

1700

**1-LO-AM1-03S****Magnetic design of twin aperture cos-theta dipoles with a semi-analytic approach**

Alessandro Maria Ricci<sup>1</sup>, Pasquale Fabbricatore<sup>2</sup>, Stefania Farinon<sup>2</sup>

<sup>1</sup>Università di Genova, INFN sezione di Genova, Italy

<sup>2</sup>INFN sezione di Genova, Italy

1715

**1-LO-AM1-04S****Development of the superconducting dipole magnet for the CBM detector**

Aleksei Bragin<sup>1</sup>

<sup>1</sup>Budker Institute of Nuclear Physics, Russia

1730

**1-LO-AM1-05S****Standalone Cold Testing of a High Performance HTS Insert-Magnet**

Jeroen van Nugteren<sup>1</sup>, Glyn Kirby<sup>2</sup>, Jaakko Murtomaeki<sup>2</sup>, Douglas Martins Araujo<sup>2</sup>, Thomas Nes<sup>2</sup>, Gijs de Rijk<sup>2</sup>, Jacky Mazet<sup>2</sup>, Francois-Olivier Pincot<sup>2</sup>, Juan-Carlos Perez<sup>2</sup>, Matthieu Canale<sup>2</sup>, Luca Gentini<sup>2</sup>, Antonella Chiuchiolo<sup>2</sup>, Bernardo Castaldo<sup>2</sup>, Luca Palmieri<sup>3</sup>, Gerard Willering<sup>2</sup>, Marta Bajko<sup>2</sup>, Lucio Rossi<sup>2</sup>

<sup>1</sup>CERN TE-MSC-MDT, Switzerland

<sup>2</sup>CERN, Switzerland

<sup>3</sup>University of Padova, Italy

1745	<b>1-LO-AM1-06S</b> <b>Detector Magnets for the Future Circular Collider ee,eh,hh Experiments</b> <u>Herman ten Kate</u> <sup>1</sup> , Alexey Dudarev <sup>1</sup> , Benoit Cure <sup>1</sup> , Helder Silva <sup>1</sup> <sup>1</sup> CERN, Switzerland
1800	<b>1-LO-AM1-07S</b> <b>Assembly and Test of the HL-LHC Orbit Corrector based on Canted Cos-Theta design</b> <u>Glyn Kirby</u> <sup>1</sup> , Jeroen Van-Nugteren <sup>1</sup> , Matthias Mentink <sup>1</sup> , Matthieu Canale <sup>1</sup> , Luca Gentini <sup>1</sup> , Jacky Mazet <sup>1</sup> , Francois-Olivier Pincot <sup>1</sup> , Lucio Fiscarelli <sup>1</sup> , Jens Steckert <sup>1</sup> , Gert-Jan Coelingh <sup>1</sup> , Juan.Carlos Perez <sup>1</sup> , Arjan Verweij <sup>1</sup> , Ezio Todesco <sup>1</sup> , Lucio Rossi <sup>1</sup> <sup>1</sup> CERN, Switzerland
1615-1815	<b>1-MO-N3T - Nb3Sn</b> <div style="float: right; background-color: #00AEEF; color: white; padding: 2px 10px; margin-bottom: 5px;">ROOM: M2 &amp; M3</div> <p>Chairs: Chiara Tarantini, NHMFL Tallahassee and Carmine Senatore, University of Geneva</p>
1615	<b>1-MO-N3T-011</b> <b>Recent advances in high field performance of Nb3Sn conductors</b> <u>Chiara Tarantini</u> <sup>1</sup> , Shreyas Balachandran <sup>1</sup> , Peter J. Lee <sup>1</sup> , Benjamin Walker <sup>1</sup> , Nawaraj Paudel <sup>1</sup> , William L. Starch <sup>1</sup> , David C. Larbalestier <sup>1</sup> <sup>1</sup> Applied Superconductivity Center, National High Magnetic Field Laboratory, Florida State University, United States of America
1645	<b>1-MO-N3T-025</b> <b>Tube type strands with and without artificial pinning center (APC) in Hyper Tech</b> <u>Xuan Peng</u> <sup>1</sup> , Xingchen Xu <sup>2</sup> , Jacob Rochester <sup>3</sup> , Mike Sumption <sup>3</sup> , Matt Rindfleisch <sup>1</sup> , Mike Tomsic <sup>1</sup> <sup>1</sup> Hyper Tech Research Inc., United States of America <sup>2</sup> Fermi Lab, United States of America <sup>3</sup> The Ohio State University, United States of America
1700	<b>1-MO-N3T-035</b> <b>Binary and Ta-doped Nb3Sn wires with internally oxidized ZrO2 particles</b> <u>Florin Buta</u> <sup>1</sup> , Marco Bonura <sup>1</sup> , Davide Matera <sup>1</sup> , Amalia Ballarino <sup>2</sup> , Simon C. Hopkins <sup>2</sup> , Bernardo Bordini <sup>2</sup> , Xavier Chaud <sup>3</sup> , Carmine Senatore <sup>1</sup> <sup>1</sup> University of Geneva, Switzerland <sup>2</sup> CERN, Switzerland <sup>3</sup> French National High Magnetic Field Laboratory, France

1715

**1-MO-N3T-04S****Achieving the FCC target with APCs: microstructural and magnetic investigation**

Stephan Pfeiffer<sup>1</sup>, Michael Stöger-Pollach<sup>1</sup>, Johannes Bernardi<sup>1</sup>, Mattia Ortino<sup>2</sup>, Thomas Baumgartner<sup>2</sup>, Mike Sumpion<sup>3</sup>, Xingchen Xu<sup>4</sup>, Xuan Peng<sup>5</sup>, Amalia Ballarino<sup>6</sup>, Simon C. Hopkins<sup>6</sup>, Michael Eisterer<sup>2</sup>

<sup>1</sup>USTEM, TU Wien, Austria

<sup>2</sup>Atominstitut, TU Wien, Austria

<sup>3</sup>Center for Superconducting and Magnetic Materials, The Ohio State University, United States of America

<sup>4</sup>Fermi National Accelerator Laboratory, United States of America

<sup>5</sup>Hyper Tech Research Incorporated, United States of America

<sup>6</sup>CERN, Switzerland

1730

**1-MO-N3T-05S****Searching in the Nb3Sn Irreversible Strain Regime for Useful Information**

Najib Cheggour<sup>1</sup>, Theodore C. Stauffer<sup>2</sup>, William Starch<sup>3</sup>

<sup>1</sup>University of Colorado Boulder, National Institute of Standards and Technology, United States of America

<sup>2</sup>National Institute of Standards and Technology, United States of America

<sup>3</sup>Applied Superconductivity Center, National High Magnetic Field Laboratory, Florida State University, United States of America

1745

**1-MO-N3T-06S****Phase and volume changes during reaction heat treatment of Nb3Sn wires**

Christian Scheuerlein<sup>1</sup>, Matthias Michels<sup>1</sup>, Friedrich Lackner<sup>1</sup>, Christian Meyer<sup>2</sup>, Jerome Andrieux<sup>3</sup>, Rodica Chiriac<sup>3</sup>, Francois Toche<sup>3</sup>, Matthias Hagner<sup>4</sup>

<sup>1</sup>CERN, Switzerland

<sup>2</sup>Bundesanstalt für Materialforschung und -prüfung (BAM), Germany

<sup>3</sup>Université Claude Bernard Lyon, France

<sup>4</sup>University of Konstanz, Germany

1800

**1-MO-N3T-07S****Field dependence of the irreversible stress limit in high-Jc Nb3Sn wires**

Carmine Senatore<sup>1</sup>, Luc Gamperle<sup>1</sup>, Christian Barth<sup>2</sup>, Jose Ferradas Troitino<sup>3</sup>, Bernardo Bordini<sup>2</sup>, Davide Tommasini<sup>2</sup>

<sup>1</sup>University of Geneva, Switzerland

<sup>2</sup>CERN, Switzerland

<sup>3</sup>University of Geneva, CERN, Switzerland

1815-2000 **Exhibitor Reception & Whisky Tasting**

HALLS 1 &amp; 2





TUESDAY 3 SEPTEMBER



EUCAS 2019  
GLASGOW

# TUESDAY 3 SEPTEMBER

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0700-0745 **4.2k Fun Run**

KELVINGROVE PARK

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0845-1000 **2-XO-PL1 ESAS Award for Excellence - Presentation Ceremony & Lecture**

CLYDE AUDITORIUM

Chairs: John Durrell, University of Cambridge and Robert Hadfield, University of Glasgow

**Recent progress of iron-based wire development for high-field applications**

Yanwei Ma

Institute of Electrical Engineering, Chinese Academy of Sciences, China

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1000-1045 **Refreshments & Exhibition**

HALLS 1 & 2

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1045-1245 **Oral Session 3**

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1245-1400 **Lunch**

HALLS 1 & 2

---

1400-1600 **Poster Session 2**

HALL 2

---

1530-1615 **Refreshments & Exhibition**

HALLS 1 & 2

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1615-1815 **Oral Session 4**

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1830-2000 **Evening Lecture - James Watt and Precision Engineering**

CLYDE AUDITORIUM

Prof John Marsh, School of Engineering, University of Glasgow



# TUESDAY 3 SEPTEMBER

0700-0745 **4.2k Fun Run** – Meet at Lord Kelvin statue Kelvingrove Park

**0845-1000 2-XO-PL1 ESAS Award for Excellence  
- Presentation Ceremony & Lecture**

CLYDE AUDITORIUM

Chairs: John Durrell, University of Cambridge and Robert Hadfield, University of Glasgow

Recent progress of iron-based wire development for high-field applications Yanwei Ma  
Institute of Electrical Engineering, Chinese Academy of Sciences, China



Yanwei Ma received his PhD in Materials Processing from Tsinghua University in 1996. Following research associate positions at the Institute for Materials Research, Tohoku University (Japan), National Institute for Materials Science (Japan) and Université de Rennes 1 (France), he joined the Institute of Electrical Engineering, Chinese Academy of Sciences in 2004 as Full Professor. He is Head of the Superconducting Materials Department at IEE-CAS, a large research group that is mostly devoted to the development of MgB<sub>2</sub> and Iron-based superconductor wires. He received the Outstanding Young Research Foundation of NSFC award in 2010. He is a board member of Physica C and Scientific Reports, Associate Editor of the Superconductivity News Forum, and board member of International Cryogenic Materials Conference (ICMC). He has published more than 280 refereed SCI journal papers, and holds more than 40 international and Chinese innovation patents in the fields.

1000-1045 **Refreshments & Exhibition**

HALLS 1 & 2

## Oral Session 3

1045-1245

**1045-1245 2-EO-DE1 - Digital Electronics 1**

Chairs: Emma Mitchell, CSIRO  
and Pascal Febvre, Université Savoie Mont Blanc

ROOM: CLYDE AUDITORIUM

1045

**2-EO-DE1-011**

**Integration of SFQ circuits with Sensors and Qubits**

Oleg Mukhanov<sup>1</sup>, A. Kirichenko<sup>1</sup>, C. Howington<sup>1</sup>, A. Jafari Salim<sup>1</sup>, M.

Hutchinson<sup>1</sup>, J. Walter<sup>1</sup>, I. Vernik<sup>1</sup>, D. Yohannes<sup>1</sup>, A. Opremcak<sup>2</sup>, C.-H. Liu<sup>2</sup>, R. McDermott<sup>2</sup>, K. Dodge<sup>3</sup>, A. Ballard<sup>3</sup>, B. Plourde<sup>3</sup>

<sup>1</sup> SeeQC, Italy

<sup>2</sup> University of Wisconsin Madison, United States of America

<sup>3</sup> Syracuse University

T U E S D A Y

1115	<b>2-EO-DE1-02I</b> <b>Recent progress of adiabatic-quantum-flux-parametron circuit technologies</b> <u>Nobuyuki Yoshikawa</u> <sup>1</sup>	<sup>1</sup> Yokohama National University, Japan
1145	<b>2-EO-DE1-03S</b> <b>A novel stochastic number generator using adiabatic superconducting technology</b> <u>Olivia Chen</u> <sup>1</sup> , Wenhui Luo <sup>1</sup> , Ruizhe Cai <sup>2</sup> , Naoki Takeuchi <sup>1</sup> , Yanzhi Wang <sup>2</sup> , Nobuyuki Yoshikawa <sup>1</sup>	<sup>1</sup> Yokohama National University, Japan <sup>2</sup> Northeastern University, United States of America
1200	<b>2-EO-DE1-04S</b> <b>Independent Test and Evaluation of C3 Circuits</b> <u>Adam Sirois</u> <sup>1</sup> , Manuel Castellanos-Beltran <sup>1</sup> , Paul Dresselhaus <sup>1</sup> , Sam Benz <sup>1</sup> , Peter Hopkins <sup>1</sup>	<sup>1</sup> NIST-Boulder, United States of America
1215	<b>2-EO-DE1-05S</b> <b>RF Waveform Synthesizer Using RSFQ Circuits</b> <u>Manuel Castellanos-Beltran</u> <sup>1</sup> , David Olaya <sup>1</sup> , Adam Sirois <sup>1</sup> , Christine Donnelly <sup>1</sup> , Paul Dresselhaus <sup>1</sup> , Peter Hopkins <sup>1</sup> , Samuel Benz <sup>1</sup>	<sup>1</sup> NIST, United States of America
1230	<b>2-EO-DE1-06S</b> <b>Design of a 16-bit bit-slice RSFQ multiplier for 64-bit microprocessors</b> <u>Jia-Hong Yang</u> <sup>1</sup> , <u>Guang-Ming Tang</u> <sup>2</sup> , Xiao-Chun Ye <sup>2</sup> , Dong-Rui Fan <sup>2</sup> , Zhi-Min Zhang <sup>2</sup> , Ning-Hui Sun <sup>2</sup>	<sup>1</sup> State Key Laboratory of Computer Architecture, Institute of Computing Technology, Chinese Academy of Sciences, School of Information and Telecommunication Engineering, Beijing University of Posts and Telecommunications, China <sup>2</sup> State Key Laboratory of Computer Architecture, Institute of Computing Technology, Chinese Academy of Sciences, China

1045-1245	<b>2-MO-FT - Fe-based Thin Films</b>	ROOM: FORTH
Chairs: Yanwei Ma, Institute of Electrical Engineering, Chinese Academy of Sciences and Marina Putti, Dipartimento di Fisica, Università degli Studi di Genova		

1045	<b>2-MO-FT-01I</b> <b>Ten years of Fe-based Superconductors: are they living up to early expectations?</b> <u>Valeria Braccini</u> <sup>1</sup>
	<sup>1</sup> CNR - SPIN, Italy



1115

**2-MO-FT-021****Jc in Fe-based superconducting films: dimensionality, anisotropy, microstructure**Jens Häniisch<sup>1</sup><sup>1</sup>Karlsruhe Institute of Technology (KIT), Institute for Technical Physics, Germany

1145

**2-MO-FT-035****Improvement of the critical current of NdFeAs(O,F) by vicinal substrates**Kazumasa Iida<sup>1</sup>, Chiara Tarantini<sup>2</sup>, Takuwa Matsumoto<sup>3</sup>, Keisuke Kondo<sup>3</sup>, Takafumi Hatano<sup>4</sup>, Sven Meyer<sup>5</sup>, Jens Häniisch<sup>5</sup>, Jan Jaroszynski<sup>2</sup>, Wang Chao<sup>6</sup>, Hikaru Saito<sup>7</sup>, Satoshi Hata<sup>8</sup>, Hiroshi Ikuta<sup>3</sup><sup>1</sup>Nagoya University, Japan<sup>2</sup>Applied Superconductivity Center, National High Magnetic Field Laboratory, Florida State University, United States of America<sup>3</sup>Department of Materials Physics, Nagoya University, Japan<sup>4</sup>Department of Materials Physics, Nagoya University, JST CREST, Japan<sup>5</sup>Institute for Technical Physics, Karlsruhe Institute of Technology, Germany<sup>6</sup>The Ultramicroscopy Research Center, Kyushu University, Japan<sup>7</sup>Department of Advanced Materials Science and Engineering, Kyushu University, JST CREST, Japan<sup>8</sup>The Ultramicroscopy Research Center, Kyushu University, Department of Advanced Materials Science and Engineering, Kyushu University, JST CREST, Japan

1200

**2-MO-FT-045****Comprehensive microwave study of BaFe<sub>2</sub>As<sub>2</sub> with K, Co, Rh, and P substitutions**Gianluca Ghigo<sup>1</sup>, Daniele Torsello<sup>1</sup>, Giovanni A. Ummarino<sup>2</sup>, Laura Gozzelino<sup>1</sup>, Roberto Gerbaldo<sup>1</sup>, Francesco Laviano<sup>1</sup>, Tsuyoshi Tamegai<sup>3</sup>, Makariy A. Tanatar<sup>4</sup>, Ruslan Prozorov<sup>4</sup>, Paul C. Canfield<sup>4</sup><sup>1</sup>Politecnico di Torino, Department of Applied Science and Technology, Istituto Nazionale di Fisica Nucleare, Italy<sup>2</sup>Politecnico di Torino, Department of Applied Science and Technology, Italy and National Research Nuclear University MEPhI (Moscow Engineering Physics Institute), Russian Federation<sup>3</sup>The University of Tokyo, Department of Applied Physics, Japan<sup>4</sup>Ames Laboratory, US Department of Energy, Department of Physics & Astronomy, Iowa State University, United States of America

1215

**2-MO-FT-055****Influence of epitaxial strain on the phase diagram of Ni doped BaFe<sub>2</sub>As<sub>2</sub> films**Stefan Richter<sup>1</sup>, Saicharan Aswartham<sup>1</sup>, Mira Brandt<sup>1</sup>, Vadim Grinenko<sup>2</sup>, Kirill Pervakov<sup>3</sup>, Aurimas Pukenas<sup>4</sup>, Werner Skrotzki<sup>4</sup>, Bernd Büchner<sup>2</sup>, Cornelius Nielsch<sup>2</sup>, Ruben Hühne<sup>1</sup><sup>1</sup>IFW Dresden, Germany<sup>2</sup>IFW Dresden, TU Dresden, Germany<sup>3</sup>Russian Academy of Sciences Moscow, Russia<sup>4</sup>TU Dresden, Germany

1230

**2-MO-FT-06S****Microwave properties of Fe(Se,Te) films in magnetic field: pinning and flux flow**

Nicola Pompeo<sup>1</sup>, Andrea Alimenti<sup>1</sup>, Kostiantyn Torokhtii<sup>1</sup>, Giulia Sylva<sup>2</sup>, Valeria Braccini<sup>3</sup>, Enrico Silva<sup>1</sup>

<sup>1</sup>Università Roma Tre, Italy

<sup>2</sup>University of Genova, Italy

<sup>3</sup>CNR-SPIN, Italy

**1045-1245 2-MO-FP1 - Critical Current and Flux Pinning 1**

ROOM: GALA

Chairs: Giuseppe Celentano, ENEA, Frascati Research Center and Anna Palau, Institut de Ciencia de Materials de Barcelona (ICMAB-CSIC)

1045

**2-MO-FP1-01I****YBa<sub>2</sub>Cu<sub>3</sub>O<sub>7-x</sub> film with Ba<sub>2</sub>Y(Nb,Ta)O<sub>6</sub> nanoinclusions for high field applications**

Giuseppe Celentano<sup>1</sup>, Francesco Rizzo<sup>1</sup>, Andrea Augieri<sup>1</sup>, Achille Angrisani Armenio<sup>1</sup>, Gianluca De Marzi<sup>1</sup>, Antonella Mancini<sup>1</sup>, Valentina Pinto<sup>1</sup>, Alessandro Rufoloni<sup>1</sup>, Angelo Vannozzi<sup>1</sup>, Andrea Alimenti<sup>2</sup>, Enrico Silva<sup>2</sup>, Kostiantyn Torokhtii<sup>2</sup>, Nicola Pompeo<sup>2</sup>, Judith Driscoll<sup>3</sup>, John Feighan<sup>3</sup>, Ahmed Kursumovic<sup>3</sup>, Alexander Meledin<sup>4</sup>, Gustaf Van Tendeloo<sup>5</sup>

<sup>1</sup>ENEA Frascati Research Centre, Italy

<sup>2</sup>Engineering Department, Roma Tre University, Italy

<sup>3</sup>University of Cambridge, Department of Materials Science and Metallurgy, United Kingdom

<sup>4</sup>Central Facility for Electron Microscopy, RWTH Aachen University, Germany, Ernst Ruska-Centre for Microscopy and Spectroscopy with Electrons (ER-C), Forschungszentrum Jülich GmbH, 52428 Jülich, Germany, University of Antwerp, EMAT Research Group, Belgium, Germany

<sup>5</sup>University of Antwerp, EMAT Research Group, Belgium

1115

**2-MO-FP1-02S****Effective Pinning Angular Range by 1D-APC in YBa<sub>2</sub>Cu<sub>3</sub>O<sub>7-x</sub> Nanocomposite Films**

Judy Wu<sup>1</sup>

<sup>1</sup>University of Kansas, United States of America

1130

**2-MO-FP1-03S****Pinning enhancement in CSD YBCO nanocomposite films with preformed nanocrystals**

Javier Díez Sierra<sup>1</sup>, Pedro López-Domínguez<sup>1</sup>, Hannes Rijckaert<sup>1</sup>, Jonathan De Roo<sup>1</sup>, Martina Falter<sup>2</sup>, Jan Bennewitz<sup>3</sup>, Mark Rikel<sup>2</sup>, Hannu Huhtinen<sup>4</sup>, Jens Hänsch<sup>5</sup>, Petriina Paturi<sup>4</sup>, Michael Bäcker<sup>2</sup>, Isabel Van Driessche<sup>1</sup>

<sup>1</sup>Ghent University, Belgium

<sup>2</sup>Deutsche Nanoschicht, Germany

<sup>3</sup>BASF SE, Germany

<sup>4</sup>University of Turku, Finland

<sup>5</sup>Karlsruhe Institute of Technology (KIT), Germany



1145

**2-MO-FP1-04S****Pinning enhancement in CSD-REBCO-nanocomposites towards high-field applications**

Manuela Erbe<sup>1</sup>, Pablo Cayado<sup>1</sup>, Wolfram Freitag<sup>1</sup>, Martina Falter<sup>2</sup>, Michael Bäcker<sup>2</sup>, Jens Hänisch<sup>1</sup>, Bernhard Holzapfel<sup>1</sup>

<sup>1</sup>Karlsruhe Institute of Technology (KIT), Institute for Technical Physics, Germany

<sup>2</sup>Deutsche Nanoschicht GmbH, Germany

1200

**2-MO-FP1-05S****New opportunities to enhance vortex pinning in solution derived YBCO thin films**

Julia Jareño<sup>1</sup>, Ziliang Li<sup>1</sup>, Laia Soler<sup>1</sup>, Juri Banchewski<sup>1</sup>, Bernat Mundet<sup>1</sup>, Natalia Chamorro<sup>2</sup>, Roger Guzmán<sup>1</sup>, Max Sieger<sup>1</sup>, Adria Pacheco<sup>1</sup>, Mariona Coll<sup>1</sup>, Anna Palau<sup>1</sup>, Sussagna Ricart<sup>1</sup>, Jaume Gazquez<sup>1</sup>, Silvia Rasi<sup>1</sup>, Jordi Farjas<sup>3</sup>, Pere Roura<sup>3</sup>, Ramon Yañez<sup>2</sup>, Josep Ros<sup>2</sup>, Teresa Puig<sup>1</sup>, Xavier Obradors<sup>1</sup>

<sup>1</sup>ICMAB-CSIC, Spain

<sup>2</sup>Universitat Autònoma de Barcelona (UAB), Spain

<sup>3</sup>U GIRONA, Spain

1215

**2-MO-FP1-06S****Vortex pinning improved by stacking faults in YBCO films containing nanorods**

Tomoya Horide<sup>1</sup>, Kaname Matsumoto<sup>1</sup>

<sup>1</sup>Kyushu Institute of Technology, Japan

1230

**2-MO-FP1-07S****Landscape tuning of PLD YBCO-BYNTO films for improved vortex pinning efficiency**

Francesco Rizzo<sup>1</sup>, Andrea Augieri<sup>1</sup>, Achille Angrisani Armenio<sup>1</sup>, Antonella Mancini<sup>1</sup>, Valentina Pinto<sup>1</sup>, Alessandro Rufoloni<sup>1</sup>, Angelo Vannozi<sup>1</sup>, Andrea Masi<sup>2</sup>, Laura Piperno<sup>2</sup>, Judith Driscoll<sup>3</sup>, John Feighan<sup>3</sup>, Ahmed Kursumovic<sup>3</sup>, Alexander Meledin<sup>4</sup>, Giuseppe Celentano<sup>1</sup>

<sup>1</sup>Superconductivity Laboratory, Fusion and Nuclear Security Department - ENEA, Italy

<sup>2</sup>Università degli studi di Roma Tre, Italy

<sup>3</sup>University of Cambridge, United Kingdom

<sup>4</sup>University of Aachen, Germany

**1045-1245 2-LO-RM - Rotating Machines**

ROOM: CARRON

Chairs: Konstantin Kovalev, Moscow Aviation Institute  
and Markus Mueller, University of Edinburgh

1045

**2-LO-RM-01I****Results and lessons learned from the 3 MW EcoSwing wind power generator**

Markus Bauer<sup>1</sup>, Tiemo Winkler<sup>1</sup>

<sup>1</sup>THEVA Dünnenschichttechnik GmbH, Germany



1115	<b>2-LO-RM-02S</b> <b>HTS synchronous machine dynamic simulation modelling and comparison with tests</b> <u>Peter O'Brien</u> <sup>1</sup> , Richard Taylor <sup>1</sup> <sup>1</sup> Queensland University of Technology, Australia
1130	<b>2-LO-RM-03S</b> <b>The general design of a 300-kvar class HTS synchronous condenser prototype</b> Peng Song <sup>1</sup> , Qihong Wu <sup>1</sup> , Zhengjun Shi <sup>2</sup> , Ye Yang <sup>3</sup> , Luming Zhang <sup>4</sup> , Beimin Wu <sup>5</sup> , Meng Song <sup>2</sup> , Timing Qu <sup>1</sup> , <u>Min Zhang</u> <sup>6</sup> <sup>1</sup> Tsinghua University, China <sup>2</sup> Electric Power Research Institute of Guangdong Power Grid Corporation, China <sup>3</sup> Central Research Institute, Dongfang Electric Corporation Ltd., China <sup>4</sup> Shanghai Electric Machinery Co., Ltd., China <sup>5</sup> Institute of Modern Physics, Chinese Academy of Science, China <sup>6</sup> University of Strathclyde, United Kingdom and Shanghai Jiao Tong University, China
1145	<b>2-LO-RM-04S</b> <b>HTS rotor coils and joints for high power density rotating machines</b> <u>Marijn Oomen</u> <sup>1</sup> , Joern Grundmann <sup>2</sup> , Michael Frank <sup>2</sup> , Peter Kummeth <sup>2</sup> , Peter van Hasselt <sup>2</sup> , Lars Kuehn <sup>2</sup> <sup>1</sup> Siemens AG, Corporate Technology, Germany <sup>2</sup> Siemens AG, Germany
1200	<b>2-LO-RM-05S</b> <b>A Cryo-cooled HTS Dynamo which outputs &gt;1kA</b> <u>Chris Bumby</u> <sup>1</sup> , Andres (Olly) Pantoja <sup>1</sup> , Sinhoi Phang <sup>1</sup> , Zhenan Jiang <sup>1</sup> , Rod Badcock <sup>1</sup> <sup>1</sup> Robinson Research Institute, Victoria University of Wellington, New Zealand
1215	<b>2-LO-RM-06S</b> <b>Effect of HTS stack sectioning on pulse magnetization efficiency in a motor</b> <u>Anis Smara</u> <sup>1</sup> , Vicente Climente-Alarcon <sup>1</sup> , Nikolay Mineev <sup>1</sup> , Lukasz Tomkow <sup>1</sup> , Bartek A. Glowacki <sup>1</sup> <sup>1</sup> University of Cambridge, United Kingdom
1230	<b>2-LO-RM-07S</b> <b>Development and testing of 10 kW fully HTS generator</b> <u>Nikolay Ivanov</u> <sup>1</sup> , Konstantin Kovalev <sup>1</sup> , Sergey Zhuravlev <sup>1</sup> , Julia Nekrasova <sup>1</sup> , Denis Rusanov <sup>1</sup> , Gennadiy Kuznetsov <sup>1</sup> <sup>1</sup> Moscow Aviation Institute, Russia

1045-1245 **2-LO-OM - Specialised Magnets**

ROOM: DOCHART

Chairs: Milan Majoros, The Ohio State University and Ziad Melhem,  
Oxford Instruments NanoScience

1045

**2-LO-OM-01I****Applied Superconductivity for Medical Accelerators**Arno Godeke<sup>1</sup><sup>1</sup>Varian Medical Systems Particle Therapy GmbH, Germany

1115

**2-LO-OM-02S****Flux Pumping into Large Inductances**Archie Campbell<sup>1</sup><sup>1</sup>University of Cambridge, United Kingdom

1130

**2-LO-OM-03S****Small cryo-cooled no-insulation 2G HTS coils for space propulsion applications**Nicholas Strickland<sup>1</sup>, Konstantinos Bouloukakis<sup>1</sup>, Max Arshavsky<sup>2</sup>, Nicholas Long<sup>1</sup>, Stuart Wimbush<sup>1</sup><sup>1</sup>The Robinson Research Institute of Victoria University of Wellington, New Zealand<sup>2</sup>Zenno Astronautics Limited, New Zealand

1145

**2-LO-OM-04S****Manufacture of 7.5 M Long Cryogen-Free Magnet System for Neutron Decay Studies**Zakiya Omar<sup>1</sup><sup>1</sup>Cryogenic Ltd, United Kingdom

1200

**2-LO-OM-05S****Experimental Study on the Quench Characteristics of a Roebel Cable Coil at 77K**Qingbo Zhang<sup>1</sup>, Edward Young<sup>1</sup>, Lorenzo Cavallucci<sup>2</sup>, Yifeng Yang<sup>1</sup><sup>1</sup>Institute of Cryogenics, University of Southampton, United Kingdom<sup>2</sup>University of Bologna, Italy

1215

**2-LO-OM-06S****Magnetic shielding above 0.7 T at 77K with a stack of 2G coated conductor annuli**Philippe Vanderbemden<sup>1</sup>, Laurent Wéra<sup>1</sup>, Jean-François Fagnard<sup>1</sup>, Benoit Vanderheyden<sup>1</sup>, Seungyong Hahn<sup>2</sup>, Anup Patel<sup>3</sup><sup>1</sup>University of Liege, Belgium<sup>2</sup>Seoul National University, South Korea<sup>3</sup>University of Cambridge, United Kingdom

TUESDAY



1230

**2-LO-OM-07S****Quench dynamics in different configurations of MgB<sub>2</sub> Rutherford cables****Elena Martínez<sup>1</sup>, Rafael Navarro<sup>1</sup>, Álvaro Cubero<sup>1</sup>, Pavol Kováč<sup>2</sup>, L'ubomír Kopera<sup>2</sup>**<sup>1</sup>Instituto de Ciencia de Materiales de Aragón (CSIC – University of Zaragoza), Spain<sup>2</sup>Institute of Electrical Engineering, Slovak Academy of Sciences, Slovakia1245-1400 **Lunch****HALLS 1 & 2****Poster Session 2**

1400-1600

**HALL 2****2-EP-DE2 - Digital Electronics 2**

Chairs: Eliana Recoba-Pawlowski, LP EM and Coenrad Fourie, Stellenbosch University

**2-EP-DE2-I01****Cell Design Methodology and Circuit Theory of RSFQ****Lieze Schindler<sup>1</sup>, Coenrad Fourie<sup>1</sup>**<sup>1</sup>Stellenbosch University, South Africa**2-EP-DE2-I02****High-Speed Operation of a 13-bit 50-sample/period SFQ-based Sine Code Generator****Fei Ke<sup>1</sup>, Yuki Yamanashi<sup>1</sup>, Thomas Ortlepp<sup>2</sup>, Nobuyuki Yoshikawa<sup>1</sup>**<sup>1</sup>Yokohama National University, Japan<sup>2</sup>CiS Research Institute for Microsensor, Germany**2-EP-DE2-I03****Impedance modeling and extraction for highly coupled superconductor circuits****Paul le Roux<sup>1</sup>, Coenrad Fourie<sup>1</sup>**<sup>1</sup>Stellenbosch University, South Africa**2-EP-DE2-I04****Fast RSFQ and ERSFQ Parallel Counters****Mustafa Çelik<sup>1</sup>, Timur Filippov<sup>1</sup>, Anubhav Sahu<sup>1</sup>, Dmitri Kirichenko<sup>1</sup>, Saad Sarwana<sup>1</sup>, Alf Lehmann<sup>1</sup>, Deepnarayan Gupta<sup>1</sup>**<sup>1</sup>HYPRES, Inc., United States of America**2-EP-DE2-S05****A Compact Voltage Pulse Multiplier for SFQ Circuit Readout****Sasan Razmkhah<sup>1</sup>, Ali Bozbey<sup>2</sup>, Pascal Febvre<sup>1</sup>**<sup>1</sup>IMEP-LAHC, CNRS UMR5130, Université Savoie Mont Blanc, France<sup>2</sup>Department of Electrical and Electronics Engineering, TOBB University of Economics and Technology, Turkey

**2-EP-DE2-S06****Low-latency AQFP logic by using serial-type power dividers**Yuxing He<sup>1</sup>, Naoki Takeuchi<sup>1</sup>, Nobuyuki Yoshikawa<sup>1</sup><sup>1</sup>Institute of Advanced Sciences, Yokohama National University, Japan**2-EP-DE2-S07****Passive Transmission Lines at Ultimate Clock Frequencies of SFQ Circuits**Sasan Razmkhah<sup>1</sup>, Pascal Febvre<sup>1</sup><sup>1</sup>Université Savoie Mont Blanc, France**2-EP-DE2-S08****The Josephson balanced comparator and its gray zone measurements**Timur Filippov<sup>1</sup>, Anubhav Sahu<sup>1</sup>, M. Eren Celik<sup>1</sup>, Dmitri Kirichenko<sup>1</sup>, Deepnarayan Gupta<sup>1</sup><sup>1</sup>HYPRES, Inc., United States of America**2-EP-DE2-S09****Static Timing Analysis with Timing Bleed: Certifying Higher Speed for RSFQ Logic**Fangzhou Wang<sup>1</sup>, Bo Zhang<sup>1</sup>, Massoud Pedram<sup>1</sup>, Sandeep Gupta<sup>1</sup><sup>1</sup>University of Southern California, United States of America**2-EP-DE2-S10****Quantum-accurate voltage waveform synthesis using Field Programmable Gate Array**Jane Ireland<sup>1</sup>, Stephen Protheroe<sup>1</sup>, Jonathan Williams<sup>1</sup>, Allan Belcher<sup>2</sup>, Ronald Dekker<sup>3</sup>, Kars Schaapman<sup>3</sup>, Ricardo Iuzzolino<sup>4</sup>, Rodrigo Melo<sup>4</sup>, Marcos Bierzychudek<sup>4</sup>, Jonas Herick<sup>5</sup>, Oliver Kieler<sup>5</sup>, Ralf Behr<sup>5</sup><sup>1</sup>National Physical Laboratory, United Kingdom<sup>2</sup>Signal Conversion, United Kingdom<sup>3</sup>Applicos, The Netherlands<sup>4</sup>INTI, Argentina<sup>5</sup>Physikalisch-Technische Bundesanstalt, Germany**2-EP-DE2-S11****A Compact AQFP Logic Cell Design Using an 8-Metal Layer Superconductor Process**Yuxing He<sup>1</sup>, Christopher Ayala<sup>1</sup>, Naoki Takeuchi<sup>2</sup>, Taiki Yamae<sup>3</sup>, Yuki Hironaka<sup>3</sup>, Nobuyuki Yoshikawa<sup>4</sup><sup>1</sup>Institute of Advanced Sciences, Yokohama National University, Japan<sup>2</sup>Institute of Advanced Sciences, Yokohama National University, PRESTO, Japan Science and Technology Agency, Japan<sup>3</sup>Department of Electrical Engineering and Computer Engineering, Yokohama National University, Japan<sup>4</sup>Institute of Advanced Sciences, Yokohama National University, Department of Electrical Engineering and Computer Engineering, Yokohama National University, Japan**2-EP-DE2-S12****A 4-bit binary encoder made from multi-gate nTrons for reading a 15-SNSPD array**Kai Zheng<sup>1</sup>, Qing-Yuan Zhao<sup>1</sup>, Ling-Dong Kong<sup>1</sup>, Shi Chen<sup>1</sup>, Hai-Yang-Bo Lu<sup>1</sup>, La-Bao Zhang<sup>1</sup>, Xiao-Qing Jia<sup>1</sup>, Jian Chen<sup>1</sup>, Lin Kang<sup>1</sup>, Pei-Heng Wu<sup>1</sup><sup>1</sup>Nanjing University, China

**2-EP-DE2-S13**

**New superconducting neuromorphic circuits based on quantum phase-slip junctions**

Ran Cheng<sup>1</sup>, Uday Goteti<sup>1</sup>, Michael Hamilton<sup>1</sup>

<sup>1</sup>Auburn University, United States of America

**2-EP-DE2-S14**

**Research on Energy-Efficient Rapid Single Flux Quantum Shift Registers**

Liyun Chen<sup>1</sup>, Guanqun Li<sup>1</sup>, Minghui Niu<sup>1</sup>, Yu Wu<sup>1</sup>, Yingyi Shao<sup>1</sup>, Xiaoping Gao<sup>1</sup>, Liliang Ying<sup>1</sup>, Jie Ren<sup>1</sup>, Zhen Wang<sup>1</sup>

<sup>1</sup>Shanghai Institute of Microsystem and Information Technology (SIMIT), Chinese Academy of Sciences, China

**2-EP-DE2-S15**

**A novel architecture of an 8-bit parallel RSFQ microprocessor**

KuoZhong Zhang<sup>1</sup>, Guang-Ming Tang<sup>1</sup>, Zhi-Min Zhang<sup>1</sup>, Xiao-Chun Ye<sup>1</sup>, Dong-Rui Fan<sup>1</sup>, Ning-Hui Sun<sup>1</sup>

<sup>1</sup>Institute of Computing Technology of the Chinese Academy of Sciences, China

**2-EP-DE2-S16**

**Design of a Control Unit for a Bit-Parallel 8-bit RSFQ Microprocessor**

Pei-Yao Qu<sup>1</sup>, Guang-Ming Tang<sup>1</sup>, Jia-Hong Yang<sup>1</sup>, Xiao-Chun Ye<sup>1</sup>, Dong-Rui Fan<sup>1</sup>, Zhi-Min Zhang<sup>1</sup>, Ning-Hui Sun<sup>1</sup>

<sup>1</sup>Institute of Computing Technology of the Chinese Academy of Sciences, China

**2-EP-DE2-S17**

**Behavior Level Simulation and Logic Synthesis Tools for RSFQ Circuits**

Xiang-Yu Zheng<sup>1</sup>, Guang-Ming Tang<sup>1</sup>, Zhi-Min Tang<sup>1</sup>, Xiao-Chun Ye<sup>1</sup>, Dong-Rui Fan<sup>1</sup>, Zhi-Min Zhang<sup>1</sup>, Ning-Hui Sun<sup>1</sup>

<sup>1</sup>Institute of Computing Technology of the Chinese Academy of Sciences, China

**2-EP-DE2-S18**

**A 16-bit Bit-Slice RSFQ Microprocessor**

Wei Xuan<sup>1</sup>, Guang-Ming Tang<sup>1</sup>, Xin Zhang<sup>1</sup>, Zhi-Min Tang<sup>1</sup>, Xiao-Chun Ye<sup>1</sup>, Ning-Hui Sun<sup>1</sup>, Zhi-Min Zhang<sup>1</sup>, Dong-Rui Fan<sup>1</sup>

<sup>1</sup>Institute of Computing Technology of the Chinese Academy of Sciences, China

**2-EP-DE2-S19**

**Spiking Neuro Network Development based on RSFQ Circuit Technology**

Cui-Cui Zhang<sup>1</sup>, Guang-Ming Tang<sup>1</sup>, Xiao-Chun Ye<sup>1</sup>, Dong-Rui Fan<sup>1</sup>, Zhi-Min Zhang<sup>1</sup>, Ning-Hui Sun<sup>1</sup>

<sup>1</sup>Institute of Computing Technology of the Chinese Academy of Sciences, China

**2-EP-DE2-S20**

**An Automatic Schematic Generator for RSFQ digital Design**

Rong-Liang Fu<sup>1</sup>, Guang-Ming Tang<sup>1</sup>, Zhi-Min Zhang<sup>1</sup>, Xiao-Chun Ye<sup>1</sup>, Dong-Rui Fan<sup>1</sup>, Ning-Hui Sun<sup>1</sup>

<sup>1</sup>Institute of Computing Technology of the Chinese Academy of Sciences, China



**2-EP-DE2-S21****Design of Bit-Slice 64-Bit TEA-Decrypt RSFQ Accelerators**

Pei-Shi Yu<sup>1</sup>, Guang-Ming Tang<sup>1</sup>, Xiao-Chun Ye<sup>1</sup>, Dong-Rui Fan<sup>1</sup>, Zhi-Min Zhang<sup>1</sup>, Ning-Hui Zhang<sup>1</sup>

<sup>1</sup>Institute of Computing Technology of the Chinese Academy of Sciences, China

**2-EP-DE2-S22****An 8-bit Bit-Slice RSFQ AES Decryption Accelerator**

Yan Zhou<sup>1</sup>, Guang-Ming Tang<sup>1</sup>, Xiao-Chun Ye<sup>1</sup>, Dong-Rui Fan<sup>1</sup>, Zhi-Min Zhang<sup>1</sup>, Ning-Hui Sun<sup>1</sup>

<sup>1</sup>Institute of Computing Technology of the Chinese Academy of Sciences, China

**2-EP-DE2-S23****High Capacity Fluxon Storage for Microprocessor Design**

Naveen Katam<sup>1</sup>, Haipeng Zha<sup>1</sup>, Massoud Pedram<sup>1</sup>, Murali Annavaram<sup>1</sup>

<sup>1</sup>University of Southern California, United States of America

**2-EP-DE2-S24****Steroid: A High Performance SFQ Architecture Using Dual-bit Boolean Logic**

Naveen Katam<sup>1</sup>, Haipeng Zha<sup>1</sup>, Massoud Pedram<sup>1</sup>, Murali Annavaram<sup>1</sup>

<sup>1</sup>University of Southern California, United States of America

**2-EP-SDP - Superconducting Detectors**

Chairs: Leonid Kuzmin, Chalmers University and Jochem Baselmans, SRON Netherlands Institute for Space Research and Delft University of Technology

**2-EP-SDP-I01****Hard X-ray Fluorescence measurements with TESs at the Advanced Photon Source**

Tejas Guruswamy<sup>1</sup>, Lisa Gades<sup>1</sup>, Antonino Miceli<sup>1</sup>, Umeshkumar Patel<sup>1</sup>, Orlando Quaranta<sup>1</sup>

<sup>1</sup>Argonne National Laboratory, United States of America

**2-EP-SDP-I02****Low Noise MgB2 HEB Mixers with Nanopatterned Surfaces**

Narendra Acharya<sup>1</sup>, Serguei Cheredinchenko<sup>1</sup>

<sup>1</sup>Chalmers University of Technology, Sweden

**2-EP-SDP-S03****Design of a 100-GHz Single Sideband Superconducting SIS Mixer**

Boliang Liu<sup>1</sup>, Dong Liu<sup>1</sup>, Ming Yao<sup>1</sup>, Honghu Li<sup>1</sup>, Sheng-Cai Shi<sup>1</sup>

<sup>1</sup>University of Sciences and Technology of China, Purple Mountain Observatory, Chinese Academy of Sciences, Key Lab of Radio Astronomy, Chinese Academy of Sciences, China



**2-EP-SDP-S04****Thermal Kinetic Inductance Detectors suitable for X-ray spectroscopy**

Andrea Giachero<sup>1</sup>, Angelo Cruciani<sup>2</sup>, Peter. K. Day<sup>3</sup>, Sergio Di Domizio<sup>4</sup>, Marco Faverzani<sup>1</sup>, Elena Ferri<sup>1</sup>, Benno Margesin<sup>5</sup>, Renato Mezzena<sup>6</sup>, Angelo Nucciotti<sup>1</sup>, Andrei Puiu<sup>1</sup>, Marco Vignati<sup>2</sup>

<sup>1</sup>University of Milano - Bicocca, INFN Sezione di Milano-Bicocca, Italy

<sup>2</sup>INFN - Sezione di Roma 1, Italy

<sup>3</sup>Jet Propulsion Laboratory, United States of America

<sup>4</sup>University of Genoa, INFN - Sezione di Genova, Italy

<sup>5</sup>Fondazione Bruno Kessler (FBK), INFN - Trento Institute for Fundamental Physics and Applications (TIPFA), Italy

<sup>6</sup>University of Trento, INFN - Trento Institute for Fundamental Physics and Applications (TIPFA), Italy

**2-EP-SDP-S05****Development of Nb/AlN/NbN Superconducting Mixers for Dome A Terahertz Telescope**

Dong Liu<sup>1</sup>, Ming Yao<sup>1</sup>, Honghu Li<sup>1</sup>, Boliang Liu<sup>1</sup>, Shengcai Shi<sup>1</sup>

<sup>1</sup>Purple Mountain Observatory, Chinese Academy of Sciences, China

**2-EP-SDP-S06****Characterisation of Kinetic Inductance Detectors with NbN Spiral Resonators**

Seiichiro Ariyoshi<sup>1</sup>, Shun Negishi<sup>1</sup>, Hikaru Mikami<sup>1</sup>, Satoru Hashimoto<sup>1</sup>, Kensuke Nakajima<sup>2</sup>, Hirotaka Terai<sup>3</sup>, Saburo Tanaka<sup>1</sup>

<sup>1</sup>Toyohashi University of Technology, Japan

<sup>2</sup>Yamagata University, Japan

<sup>3</sup>National Institute of Information and Communications Technology, Japan

**2-EP-SDP-S07****Spectral Filtering with Gratings for Superconducting Detectors in the THz Range**

Alexander Schmid<sup>1</sup>, Artem Kuzmin<sup>1</sup>, Stefan Wuensch<sup>1</sup>, Konstantin Ilin<sup>1</sup>, Michael Siegel<sup>1</sup>

<sup>1</sup>Karlsruhe Institute of Technology (KIT), Germany

**2-EP-SDP-S08****YBCO Josephson junction coupled with a novel bowtie loaded meander antenna**

Mei Yu<sup>1</sup>, Haifeng Geng<sup>1</sup>, Tao Hua<sup>1</sup>, Weiwei Xu<sup>1</sup>, Zhi Ning Chen<sup>2</sup>, Jianxin Shi<sup>3</sup>, Huabing Wang<sup>1</sup>, Jian Chen<sup>1</sup>, Peiheng Wu<sup>1</sup>

<sup>1</sup>Nanjing University, China

<sup>2</sup>National University of Singapore, Singapore

<sup>3</sup>Zijin College, Nanjing University of Science and Technology, China

**2-EP-SDP-S09****Energy resolution of titanium transition-edge sensor single-photon detectors**

JiaQiang Zhong<sup>1</sup>, Wen Zhang<sup>1</sup>, Zheng Wang<sup>1</sup>, Yue Geng<sup>1</sup>, Peizhan Li<sup>1</sup>, Sheng-Cai Shi<sup>1</sup>

<sup>1</sup>Purple Mountain Observatory, Chinese Academy of Sciences, China

**2-EP-SDP-S10****Fabrication of mushroom-type gold absorber for transition edge X-ray detectors**

Yue Lyu<sup>1</sup>, Wentao Wu<sup>1</sup>, Hubing Wang<sup>1</sup>, Bo Gao<sup>1</sup>, Zhen Wang<sup>1</sup>

<sup>1</sup>CAS Center for Excellence in Superconducting Electronics (CENSE), China



**2-EP-SDP-S11****Evaluation of Mid Infrared Superconducting Hot Electron Bolometer Mixer**

Akira Kawakami<sup>1</sup>, Hisashi Shimakage<sup>2</sup>, Junsei Horikawa<sup>3</sup>, Shunkichi Tanaka<sup>1</sup>, Yoshinori Uzawa<sup>4</sup>

<sup>1</sup>National Institute of Information and Communications Technology, Japan

<sup>2</sup>Ibaraki University, Japan

<sup>3</sup>Fukui College, Japan

<sup>4</sup>National Astronomical Observatory of Japan, Japan

**2-EP-SDP-S12****High temperature superconducting bolometer for THz detection at LN2 temperature**

Andrea Napolitano<sup>1</sup>, Samuele Ferracin<sup>1</sup>, Gianluca Ghigo<sup>1</sup>, Laura Gozzelino<sup>1</sup>, Daniele Torsello<sup>1</sup>, Francesco Laviano<sup>1</sup>, Roberto Gerbaldo<sup>1</sup>

<sup>1</sup>Politecnico di Torino, Italy

**2-EP-SDP-S13****Superconductor to resistive state switching by multiple events in NbTiN SNSPDS**

Daniela Salvoni<sup>1</sup>

<sup>1</sup>University of Naples Federico II, Italy

**2-EP-SDP-S14****Josephson junction based single photon microwave detector for axion detection**

Sergio Pagano<sup>1</sup>, Giovanni Filatrella<sup>1</sup>

<sup>1</sup>Physics Department, University of Salerno and INFN gc, Italy

**2-EP-TMP - Terahertz and Microwave Devices**

Chairs: Tahashi Noguchi, RIKEN/NAOJ and Maciej Zgirski, Institute of Physics of Polish Academy of Sciences

TUESDAY

**2-EP-TMP-I01****A superconducting flux-flow oscillator of terahertz range**

Nickolay Kinev<sup>1</sup>, Kirill Rudakov<sup>2</sup>, Lyudmila Filippenko<sup>1</sup>, Mikhail Fominskiy<sup>1</sup>, Andrey Baryshev<sup>3</sup>, Valery Koshelets<sup>1</sup>

<sup>1</sup>Kotel'nikov Institute of Radio Engineering and Electronics of RAS, Russia

<sup>2</sup>Kotel'nikov Institute of Radio Engineering and Electronics of RAS, Russia and University of Groningen, The Netherlands

<sup>3</sup>University of Groningen, The Netherlands

**2-EP-TMP-S02****Modeling the Resonance Shifts Due to Coupling Between HTS Coils in NMR Probes**

Jeremy Thomas<sup>1</sup>, William Brey<sup>2</sup>, Vijaykumar Ramaswamy<sup>3</sup>, Daniel Belc<sup>1</sup>, Taylor Johnston<sup>1</sup>, Nicolas Freytag<sup>3</sup>, Lawrence Hornak<sup>4</sup>, Arthur Edison<sup>4</sup>

<sup>1</sup>Florida State University, United States of America

<sup>2</sup>National High Magnetic Field Laboratory, United States of America

<sup>3</sup>Bruker Corporation, United States of America

<sup>4</sup>University of Georgia, United States of America



**2-EP-TMP-S03****Design of Microwave Antenna Using HTS thick disk for Wireless Power Transfer**

Atsushi Saito<sup>1</sup>, Kotaro Irie<sup>1</sup>, Naoto Sekiya<sup>2</sup>, Satoshi Ono<sup>3</sup>, Masanori Takeda<sup>4</sup>, Kensuke Nakajima<sup>1</sup>

<sup>1</sup>Graduate School of Science and Engineering, Yamagata University, Japan

<sup>2</sup>Integrated Graduate School of Medicine, Engineering, and Agricultural Sciences Faculty of Engineering, University of Yamanashi, Japan

<sup>3</sup>The University of Electro-Communications, Japan

<sup>4</sup>Graduate School of Engineering, Shizuoka University, Japan

**2-EP-TMP-S04****Nonlinear intermode coupling in Nb microwave resonator with Josephson elements**

Marat Khabipov<sup>1</sup>, Maikel Petrich<sup>1</sup>, Judith Felgner<sup>1</sup>, Ralf Dolata<sup>1</sup>, Alexander Zorin<sup>1</sup>

<sup>1</sup>Physikalisch-Technische Bundesanstalt, Germany

**2-EP-TMP-S05****Hybrid superconducting-ferromagnetic circuits with on-chip controllable coupling**

Sergey Danilin<sup>1</sup>, Valentino Seferai<sup>1</sup>, Paul Baity<sup>1</sup>, Dmytro Bozhko<sup>1</sup>, Umberto Nasti<sup>1</sup>, Alessandro Casaburi<sup>1</sup>, Robert Hadfield<sup>1</sup>, Martin Weides<sup>1</sup>

<sup>1</sup>School of Engineering, United Kingdom

**2-EP-TMP-S06****Magnon spectroscopy of YIG films using superconducting resonators**

Paul Baity<sup>1</sup>, Dmytro Bozhko<sup>1</sup>, Sergey Danilin<sup>1</sup>, Valentino Seferai<sup>1</sup>, Umberto Nasti<sup>1</sup>, Alessandro Casaburi<sup>1</sup>, Robert Hadfield<sup>1</sup>, Martin Weides<sup>1</sup>

<sup>1</sup>University of Glasgow, United Kingdom

**2-EP-TMP-S07****PIN Diode High Temperature Superconducting Limiting Filter**

Jia Wang<sup>1</sup>, Liang Sun<sup>1</sup>, Yun Wu<sup>1</sup>, Jinhao Dai<sup>1</sup>, Xu Wang<sup>1</sup>, Xueqiang Zhang<sup>1</sup>, Guoqiang Li<sup>1</sup>, Chunguang Li<sup>1</sup>, Hong Li<sup>1</sup>, Yusheng He<sup>1</sup>

<sup>1</sup>Institute of Physics Chinese Academy of Sciences, China

**2-EP-TMP-S08****Development of superconducting pick-up coil for 40-MHz solid-state NMR**

Kotaro Irie<sup>1</sup>, Haruki Hoshi<sup>1</sup>, Shohe Oda<sup>1</sup>, Atsushi Saito<sup>1</sup>, Masato Takahashi<sup>2</sup>

<sup>1</sup>Graduate School of Science and Engineering, Yamagata University, Japan

<sup>2</sup>NMR Science and Development Division, RIKEN SPring-8 Center, Japan

**2-EP-TMP-S09****Active superconductor antennas for wide band receivers**

Victor K. Kornev<sup>1</sup>, Nikolay V. Kolotinskiy<sup>2</sup>, Daniil E. Bazulin<sup>1</sup>

<sup>1</sup>Department of Physics, Lomonosov Moscow State University, Russia

<sup>2</sup>Department of Physics, Lomonosov Moscow State University, Quantum Technology Centre, Department of Physics, Lomonosov Moscow State University, Russia

**2-EP-TMP-S10****Cooper pair – phonon coupling using surface acoustic wave resonators**Sergey Kafanov<sup>1</sup>, Yuri Pashkin<sup>1</sup>, Jonathan Collins<sup>2</sup>, Erik Jellyman<sup>1</sup>, Andrew Guthrie<sup>1</sup>,Alessandro Casaburi<sup>2</sup><sup>1</sup>Lancaster University, United Kingdom<sup>2</sup>School of Engineering, University of Glasgow, United Kingdom**2-EP-TMP-S11****A versatile three-wave mixing Josephson traveling-wave parametric amplifier**Christoph Kissling<sup>1</sup>, Marat Khabipov<sup>1</sup>, Ralf Dolata<sup>1</sup>, Judith Felgner<sup>1</sup>, Alexander Zorin<sup>1</sup><sup>1</sup>Physikalisch-Technische Bundesanstalt, Germany**2-EP-TMP-S12****Pulse propagation in Josephson junction array-based RF waveform synthesizers**Peter Hopkins<sup>1</sup>, Christine Donnelly<sup>2</sup>, Justus Brevik<sup>1</sup>, Anna Fox<sup>1</sup>, Paul Dresselhaus<sup>1</sup>, Samuel Benz<sup>1</sup><sup>1</sup>Quantum Electromagnetics Division, National Institute of Standards and Technology, United States of America<sup>2</sup>Quantum Electromagnetics Division, National Institute of Standards and Technology, Department of Electrical Engineering, Stanford University, United States of America**2-EP-TMP-S13****Josephson Parametric Amplifier in Readout of a Superconducting Qubit**Yapeng Lu<sup>1</sup>, Weiwei Xu<sup>1</sup>, Yongchao Li<sup>1</sup>, Jiazheng Pan<sup>1</sup>, Tao Hua<sup>1</sup>, Jianxin Shi<sup>1</sup>, Guozhu Sun<sup>1</sup><sup>1</sup>Nanjing University, China**2-EP-TMP-S14****Extension of coupled mode theory for parametric amplification**Thomas Dixon<sup>1</sup><sup>1</sup>Royal Holloway, NPL, United Kingdom**2-LP-CO - Cooling, Insulation, Heat Transfer**

Chair: Alain Ravex, CryoConsult

**2-LP-CO-I01****Thermal Transport Properties of Multiple OHP under Simultaneous Operation**Akifumi Kawagoe<sup>1</sup>, Naohiro Nagamoto<sup>1</sup>, Toshiyuki Mito<sup>2</sup>, Yuta Onodera<sup>2</sup>, Kazuya Takahata<sup>2</sup>, Nagato Yanagi<sup>2</sup>, Shinji Hamaguchi<sup>2</sup>, Suguru Takata<sup>2</sup><sup>1</sup>Kagoshima University, Japan<sup>2</sup>NIFS, Japan**2-LP-CO-I02****Refrigerant circulation system for cooling a HTS coil**Yunzhi Xie<sup>1</sup>, Setsura Nagai<sup>1</sup>, Tetsuji Okamura<sup>1</sup>, Naoki Hirano<sup>2</sup>, Yoshikatsu Hiratsuka<sup>3</sup><sup>1</sup>Tokyo Institute of Technology, Japan<sup>2</sup>Chubu Electric Power Co., Ltd, Japan<sup>3</sup>Sumitomo Heavy Industries,Ltd., Japan

**2-LP-CO-S03****Influence of Subcooling on Breakdown and Prebreakdown in Heated Liquid Nitrogen**

Raphaël Chassagnoux<sup>1</sup>, Olivier Lesaint<sup>2</sup>, Nelly Bonifaci<sup>2</sup>, Olivier Gallot-Lavalée<sup>2</sup>, Pierre Legendre<sup>3</sup>, Christophe Creusot<sup>3</sup>, Alain Girodet<sup>3</sup>

<sup>1</sup>SuperGrid Institute SAS, G2Elab, France

<sup>2</sup>G2Elab, France

<sup>3</sup>SuperGrid Institute SAS, France

**2-LP-CO-S04****Dielectric Strength of Insulating Material in LN2 with Thermally Induced Bubbles**

Dirk Gromoll<sup>1</sup>, Ralph Schumacher<sup>1</sup>, Christof Humpert<sup>2</sup>

<sup>1</sup>Institute of Electrical Power Engineering, TH Köln - University of Applied Sciences, Germany

<sup>2</sup>Institute of Electrical Power Engineering, TH Köln - University of Applied Sciences, Cologne Institute for Renewable Energy (CIRE), TH Köln - University of Applied Sciences, Germany

**2-LP-CO-S05****Directional control of arcs in LN2 using externally biased magnetic fields**

Muhammad Junaid<sup>1</sup>, Lei Gao<sup>1</sup>, Hongxu Li<sup>1</sup>, Bin Xiang<sup>1</sup>, Zhiyuan Liu<sup>1</sup>, Yingsan Geng<sup>1</sup>, Jianhua Wang<sup>1</sup>

<sup>1</sup>State Key Laboratory of Electrical Insulation and Power Equipment, School of Electrical Engineering, Xi'an Jiaotong University, China

**2-LP-CO-S06****Electrical Treeing Characteristics in Epoxy under Electro-magnetic Coupled Field**

Boxue Du<sup>1</sup>, Mingyang Wang<sup>1</sup>, Xuetao Han<sup>1</sup>, Jin Li<sup>1</sup>, Zhonglei Li<sup>1</sup>

<sup>1</sup>Tianjin University, China

**2-LP-CO-S07****Polarity Effect on DC Breakdown Characteristics of LN2/Insulation Film System**

Lei Gao<sup>1</sup>, Bin Xiang<sup>1</sup>, Zhiyuan Liu<sup>1</sup>, Yingsan Geng<sup>1</sup>, Jianhua Wang<sup>1</sup>, Satoru Yanabu<sup>1</sup>

<sup>1</sup>State Key laboratory of Electrical Insulation and Power Equipment, China

**2-LP-CO-S08****Basic research of HTS coil cooling assist technology by magnetic refrigeration**

Naoki Hirano<sup>1</sup>, Setsura Nagai<sup>2</sup>, Yunzhi Xie<sup>2</sup>, Tetsuji Okamura<sup>2</sup>

<sup>1</sup>National Institute for Fusion Science, Japan

<sup>2</sup>Tokyo Institute of Technology, Japan

**2-LP-CO-S09****Heat extraction from surface mounted HTS stacks in different cooling conditions**

Nikolay Mineev<sup>1</sup>, Lukasz Tomkow<sup>1</sup>, Anis Smara<sup>1</sup>, Vicente Climente-Alarcon<sup>1</sup>, Bartek Glowacki<sup>2</sup>

<sup>1</sup>Applied Superconductivity and Cryoscience Group, Department of Materials Science and Metallurgy, University of Cambridge, United Kingdom

<sup>2</sup>Institute of Power Engineering, Poland and Applied Superconductivity and Cryoscience Group, Department of Materials Science and Metallurgy, University of Cambridge, United Kingdom

**2-LP-CO-S10****A new way to solve the critical current degradation of YBCO coils by ice**Yunfei Tan<sup>1</sup><sup>1</sup>Huazhong University of Science and Technology, China**2-LP-CO-S11****2K (ABS ZERO) Stochastic/Harmonic Helium Distillation**Charles E Janeke<sup>1</sup><sup>1</sup>American Association Airconditioning Engineers, United States of America**2-LP-CO-S12****Analysis of -Graded Spacer for HVAC GHe Insulated Superconducting Pipelines**Jin Li<sup>1</sup>, Boxue Du<sup>1</sup>, Hucheng Liang<sup>1</sup>, Jinpeng Jiang<sup>1</sup>, Xiaoxiao Kong<sup>1</sup>, Mingyang Wang<sup>1</sup><sup>1</sup>Tianjin University, China**2-LP-CO-S13****Simulation and Experiments for Superconducting DC Energy Pipeline Cooled by LNG**Jianhui Chen<sup>1</sup>, Guomin Zhang<sup>1</sup><sup>1</sup>Key Laboratory of Applied Superconductivity, Chinese Academy of Sciences, China**2-LP-CO-S14****Insulative High Thermal Conduction FRPs for Increase of Stability in HTS Coils**Gimpei Arisaka<sup>1</sup><sup>1</sup>Sophia University, Japan

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**2-LP-FCT - FCL and Transformers**

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Chairs: Gaëtan Didier, University of Lorraine and Xiaoze Pei, University of Bath

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TUESDAY

**2-LP-FCT-I01****Optical fiber sensing for fast hotspot detection in SFCL**Arooj Akbar<sup>1</sup>, Zhisheng Yang<sup>1</sup>, Nicolò Riva<sup>1</sup>, Guillaume Escamez<sup>2</sup>, Bertrand Dutoit<sup>1</sup><sup>1</sup>Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland<sup>2</sup>Supergrid Institute, France**2-LP-FCT-I02****Additional stabilization of REBCO coated conductors for Fault Current Limiters**Michal Vojenčík<sup>1</sup>, Marek Búran<sup>1</sup>, Marek Mošáť<sup>1</sup>, Marcela Pekaríková<sup>2</sup>, Fedor Gömöry<sup>1</sup><sup>1</sup>Slovak Academy of Sciences, Institute of Electrical Engineering, Slovakia<sup>2</sup>Slovak University of Technology in Bratislava, Faculty of Materials Science and Technology in Trnava, Slovakia**2-LP-FCT-I03****Experimental Study on a Novel Superconducting Fault Current Limiting Transformer**Jie Sheng<sup>1</sup>, zhijian Jin<sup>1</sup>, Zhuyong Li<sup>2</sup><sup>1</sup>Department of Electrical Engineering, Shanghai Jiao Tong University, China<sup>2</sup>Shanghai Jiao Tong University, China

**2-LP-FCT-S04****Current limiting characteristics of a SFCL composed of REBCO pancake coils**Daiki Sakamoto<sup>1</sup>, Takuya Sakamoto<sup>1</sup>, Yasuyuki Shirai<sup>1</sup><sup>1</sup>Kyoto University, Japan**2-LP-FCT-S05****Additional Losses in the Windings of the HTS Transformer Made of Parallel Tapes**Grzegorz Wojtasiewicz<sup>1</sup>, Beata Kondratowicz-Kucewicz<sup>1</sup><sup>1</sup>Electrotechnical Institute, Poland**2-LP-FCT-S06****HTS coated conductor current limiting performance at temperatures lower than 77K**Marek Mošat<sup>1</sup>, Michal Vojenčiak<sup>1</sup>, Fedor Gömöry<sup>1</sup>, Ján Šouc<sup>1</sup>, Marcela Pekarčíková<sup>2</sup><sup>1</sup>Institute of Electrical Engineering SAS, Slovakia<sup>2</sup>Faculty of Material Science and Technology STU in Trnava, Slovakia**2-LP-FCT-S07****Simulation of the Thermal Performance of HTS Coated Conductors for HVDC SFCL**Wescley Tiago B. de Sousa<sup>1</sup>, Andrej Kudymow<sup>1</sup>, Severin Strauß<sup>1</sup>, Steffen Elschner<sup>2</sup>, Mathias Noe<sup>1</sup><sup>1</sup>Karlsruhe Institute of Technology (KIT), Institute for Technical Physics, Germany<sup>2</sup>Hochschule Mannheim, Institute for Energy Systems, Germany**2-LP-FCT-S08****Novel Configuration for Resistive SFCL with bifilar 2G tapes**Luis Micahel Martins Rocha<sup>1</sup>, Henrique Demétrio Mariano Dias Carneiro<sup>1</sup>, Felipe Sass<sup>1</sup>, Felipe dos Santos Costa<sup>1</sup>, Guilherme Gonçalves Sotelo<sup>1</sup>, Alexander Polasek<sup>1</sup>, Rubens de Andrade Júnior<sup>1</sup><sup>1</sup>Federal University of Rio de Janeiro or University (UFRJ) / Center for Energy Research (CEPEL), Brazil**2-LP-FCT-S09****An advanced shunt for FCL REBCO tape**Pascal Tixador<sup>1</sup>, Alexandre Zampa<sup>2</sup>, Arnaud Badel<sup>2</sup><sup>1</sup>Université Grenoble Alpes – CNRS Grenoble INP, France<sup>2</sup>CNRS, France**2-LP-FCT-S10****Project FASTGRID - Tests on 2G HTS for its Application in DC Resistive SC FCL**Andrej Kudymow<sup>1</sup>, Steffen Elschner<sup>2</sup>, Mathias Noe<sup>1</sup>, Szymon Palasz<sup>1</sup>, Wescley Tiago Batista de Sousa<sup>1</sup><sup>1</sup>Karlsruhe Institute of Technology (KIT), Germany<sup>2</sup>University of Applied Science Mannheim, Germany**2-LP-FCT-S11****The influence of hot spots on the overcurrent characteristics of HTS-CCs**Jiabin Yang<sup>1</sup>, Boyang Shen<sup>1</sup>, Chao Li<sup>1</sup>, Jun Ma<sup>1</sup>, Tim Coombs<sup>1</sup><sup>1</sup>University of Cambridge, United Kingdom

**2-LP-FCT-S12****Research on delamination of YBCO tapes based on Hilbert-Huang Transform**Haonan Wang<sup>1</sup>, Guomin Zhang<sup>1</sup>, Zhifeng Zhang<sup>1</sup><sup>1</sup>Key Laboratory of Applied Superconductivity, Chinese Academy of Sciences, China**2-LP-FCT-S13****Improvement of Recovery Characteristics of GdBCO Tape for a Resistive SFCL**Sota Yanai<sup>1</sup>, Chihiro Maeda<sup>1</sup>, Yasuyuki Shirai<sup>1</sup>, Masahiro Shiotsu<sup>1</sup>, Shigeki Isojima<sup>2</sup><sup>1</sup>Kyoto University, Japan<sup>2</sup>Sumitomo Electric Industries, Ltd, Japan**2-LP-FCT-S14****Operational Characteristics of Integrated Three-Phase SFCL Using Double Quench**Tae-Hee Han<sup>1</sup>, Shin-Won Lee<sup>1</sup>, Seok-Cheol Ko<sup>2</sup>, Sung-Hun Lim<sup>3</sup><sup>1</sup>Jungwon University, South Korea<sup>2</sup>Kongju National University, South Korea<sup>3</sup>Soongsil University, South Korea**2-LP-FCT-S15****Study of CC tapes damaged during fault current limitation at 66 K**Marcela Pekarčíková<sup>1</sup>, Jozef Mišký<sup>1</sup>, Michal Skarba<sup>1</sup>, Martin Necpal<sup>1</sup>, Michal Vojenčiak<sup>2</sup>, Marek Moša<sup>2</sup>, Fedor Gömöry<sup>2</sup><sup>1</sup>Slovak University of Technology in Bratislava, Faculty of Materials Science and Technology in Trnava, Slovakia<sup>2</sup>Slovak Academy of Sciences, Institute of Electrical Engineering, Slovakia**2-LP-FCT-S16****Development of a superconducting transformer for high current conductor testing**Hongjun Ma<sup>1</sup>, Yi Shi<sup>2</sup>, Huajun Liu<sup>2</sup>, Fang Liu<sup>2</sup>, Jinggang Qin<sup>2</sup>, Huang Chen<sup>1</sup>, Xintao Zhang<sup>1</sup>, Yu Wu<sup>2</sup>, Jiangang Li<sup>2</sup><sup>1</sup>Institute of Plasma Physics Chinese Academy of Sciences, University of Science and Technology of China, Christmas Island<sup>2</sup>Institute of Plasma Physics Chinese Academy of Sciences, China**2-LP-FCT-S17****Losses estimate in a new concept of inductive-resistive SFCL**Bélen Pérez<sup>1</sup>, Pilar Suárez<sup>1</sup>, Alfredo Álvarez<sup>1</sup>, João Murta-Pina<sup>2</sup>, Anabela Pronto<sup>2</sup>, Roberto Oliveira<sup>2</sup><sup>1</sup>Universidad de Extremadura, Spain<sup>2</sup>Universidade Nova de Lisboa, Portugal**2-LP-FCT-S18****Lightweight Design of 6.9/1.0 kV-10 MVA REBCO Superconducting Transformer**Goki Kawasaki<sup>1</sup>, Hiromasa Sasa<sup>1</sup>, Shun Miura<sup>1</sup>, Masataka Iwakuma<sup>1</sup>, Akira Tomioka<sup>2</sup>, Masayuki Konno<sup>2</sup>, Teruo Izumi<sup>3</sup><sup>1</sup>Kyushu University, Japan<sup>2</sup>Fuji Electric Co. Ltd., Japan<sup>3</sup>AIST, Japan

**2-LP-FCT-S19****Operation of Three-Phase Transformer Type SFCL Due to Its Secondary Connection**Sung-Hun Lim<sup>1</sup><sup>1</sup>Soongsil University, South Korea**2-LP-FCT-S20****Characteristics of HTS Transformer Under the Different Current Ramp Rate**Jie Chen<sup>1</sup><sup>1</sup>Beijing Jiaotong University and University of Cambridge, United Kingdom**2-LP-FCT-S21****Design and Experimental analysis of HTS traction transformer coil**Xin Zhao<sup>1</sup>, Jin Fang<sup>1</sup><sup>1</sup>Beijing Jiaotong University, China**2-LP-FCT-S22****Superconducting Wireless Power Transfer for Electric Vehicles**Philip Machura<sup>1</sup>, Kevin Kails<sup>1</sup>, Quan Li<sup>1</sup><sup>1</sup>School of Engineering, Institute for Energy Systems, The University of Edinburgh, United Kingdom**2-LP-FCT-S23****Mid-range wireless power transfer system using superconducting and copper coils**Luís Romba<sup>1</sup>, Carla Borges<sup>1</sup>, João Murta-Pina<sup>1</sup>, Stanimir Valtchev<sup>2</sup>, Anabela Pronto<sup>2</sup>, Mário Ventim-Neves<sup>2</sup><sup>1</sup>Faculdade de Ciências e Tecnologia - FCT NOVA, Portugal<sup>2</sup>Centre of Technology and Systems - Uninova, Portugal**2-LP-MR - MRI and Medical Apps**

Chairs: M'hamed Lacrimi, Siemens Healthcare Ltd MT and Pierre Vedrine, CEA Paris Saclay

**2-LP-MR-I01****Development of a half-size 3 T REBCO superconducting magnet for MRI**Hideaki Miura<sup>1</sup>, Tetsuya Matsuda<sup>1</sup>, Kota Nomura<sup>1</sup>, Tatsuya Inoue<sup>1</sup>, Yusuke Morita<sup>1</sup>, Ryo Eguchi<sup>1</sup>, Shunsuke Otake<sup>1</sup>, Hajime Tanabe<sup>1</sup>, Shoichi Yokoyama<sup>1</sup>, Shinji Sato<sup>1</sup><sup>1</sup>Mitsubishi Electric Corporation, Japan**2-LP-MR-I02****Protection Scheme of Multi-stacked No-Insulation REBCO coil system for MRIs**Haruka Onoshita<sup>1</sup>, Yuka Yoshihara<sup>1</sup>, Mai Hamanaka<sup>1</sup>, Atsushi Ishiyama<sup>1</sup>, So Noguchi<sup>2</sup>, Tomonori Watanabe<sup>3</sup>, Shigeo Nagaya<sup>3</sup><sup>1</sup>Waseda University, Japan<sup>2</sup>Hokkaido University, Japan<sup>3</sup>Chubu Electric Power Co.,Inc, Japan

**2-LP-MR-I03****Reduction Method for Influence of Screening Current in REBCO Coil System for MRI**Zenta Inagaki<sup>1</sup>, Atsushi Ishiyama<sup>1</sup>, Hiroshi Ueda<sup>2</sup><sup>1</sup>Waseda University, Japan<sup>2</sup>Okayama University, Japan**2-LP-MR-S04****Feedforward current control of MRI magnet with power supply driven operation**Satoshi Kitada<sup>1</sup>, Ryuhei Sakamoto<sup>1</sup>, Yasuyuki Shirai<sup>1</sup>, Shoichi Yokoyama<sup>2</sup><sup>1</sup>Kyoto University, Japan<sup>2</sup>Mitsubishi Electric Co., Japan**2-LP-MR-S05****The Rising and Falling Field Device of High Field MRI Superconducting Magnet**Tianli Dai<sup>1</sup>, Chao Zhou<sup>2</sup>, Jinggang Qin<sup>2</sup>, Jiangang Li<sup>2</sup><sup>1</sup>Institute of Plasma Physics Chinese Academy of Sciences, University of Science and Technology of China, China<sup>2</sup>Institute of Plasma Physics Chinese Academy of Sciences, China**2-LP-MR-S06****A 3T MRI magnet based on MgB2 – magnetic, mechanical and thermal modeling**Milan Majoros<sup>1</sup>, Michael Sumption<sup>1</sup>, Matt Rindfleisch<sup>2</sup>, David Doll<sup>2</sup>, Michael Tomsic<sup>2</sup>, Edward Collings<sup>1</sup><sup>1</sup>The Ohio State University, United States of America<sup>2</sup>Hyper-Tech Research, Inc., United States of America**2-LP-MR-S07****Development of HTS Bulk magnet for High-Resolution NMR**Takashi Nakamura<sup>1</sup><sup>1</sup>RIKEN, Japan**2-LP-MR-S08****Asymmetric superconducting magnet design for head MRI**Yaoohui Wang<sup>1</sup>, Qiuliang Wang<sup>1</sup>, Lei Wang<sup>1</sup>, Hongyi Qu<sup>1</sup><sup>1</sup>Institute of Electrical Engineering, Chinese Academy of Sciences, China**2-LP-MR-S09****A target field approach to optimal cylindrical shim coils for MRI system**Kaihong Wu<sup>1</sup>, Yu Wu<sup>1</sup>, Yi Shi<sup>1</sup>, Yongliang Zhang<sup>1</sup>, Aihua Xu<sup>1</sup>, Chao Dai<sup>1</sup>, Qiangwang Hao<sup>1</sup>, Yuanyuan Ma<sup>1</sup><sup>1</sup>Institute of Plasma Physics Chinese Academy of Sciences, China**2-LP-MR-S10****Simulation of screening current-induced field in 500 MHz LTS/HTS NMR magnets**Eisuke Morikawa<sup>1</sup>, Keisuke Tokunaga<sup>1</sup>, Tomoaki Koizumi<sup>1</sup>, SeokBeom Kim<sup>1</sup>, Hiroshi Ueda<sup>1</sup>, Mamoru Hamada<sup>2</sup>, Yoshinori Yanagisawa<sup>3</sup>, Hideaki Maeda<sup>4</sup><sup>1</sup>Okayama University, Japan<sup>2</sup>Japan Superconductor Technology, Japan<sup>3</sup>RIKEN, Japan<sup>4</sup>Japan Superconductor Technology /RIKEN, Japan

**2-LP-MR-S11****Distributed Temperature Detection of HTS Coils with Encapsulated Optical Fibers**Zhuoyong Li<sup>1</sup>, Junjie Jiang<sup>1</sup>, Jie Sheng<sup>1</sup>, Zhiyong Hong<sup>1</sup><sup>1</sup>Shanghai Jiao Tong University, China**2-LP-MR-S12****Optimised Design of HTS Medical Accelerators**Yvonne Turid Baird<sup>1</sup>, Quan Li<sup>1</sup><sup>1</sup>School of Engineering, Institute for Energy Systems, The University of Edinburgh, United Kingdom**2-LP-MR-S13****Field errors due to screening current in HTS coil system for Skeleton Cyclotron**Hiroshi Ueda<sup>1</sup>, Yuta Awazu<sup>1</sup>, SeokBeom Kim<sup>1</sup>, So Noguchi<sup>2</sup>, Tomonori Watanabe<sup>3</sup>, Shigeo Nagaya<sup>3</sup>, Jun Yoshida<sup>4</sup>, Mitsuhiro Fukuda<sup>5</sup>, Atsushi Ishiyama<sup>6</sup><sup>1</sup>Okayama University, Japan<sup>2</sup>Hokkaido University, Japan<sup>3</sup>Chubu Electric Power Co., Inc., Japan<sup>4</sup>Sumitomo Heavy Industries, Ltd., Japan<sup>5</sup>Osaka University, Japan<sup>6</sup>Waseda University, Japan**2-LP-MR-S14****Evaluation of mechanical behaviors in HTS coil system for Skeleton Cyclotron**Yuta Awazu<sup>1</sup>, SeokBeom Kim<sup>1</sup>, Hiroshi Ueda<sup>1</sup>, So Noguchi<sup>2</sup>, Tomonori Watanabe<sup>3</sup>, Shigeo Nagaya<sup>3</sup>, Jun Yoshida<sup>4</sup>, Mitsuhiro Fukuda<sup>5</sup>, Atsushi Ishiyama<sup>6</sup><sup>1</sup>Okayama University, Japan<sup>2</sup>Hokkaido University, Japan<sup>3</sup>Chubu Electric Power Co., Inc., Japan<sup>4</sup>Sumitomo Heavy Industries, Ltd., Japan<sup>5</sup>Osaka University, Japan<sup>6</sup>Waseda University, Japan**2-LP-MR-S15****A Review of HTS Persistent Current Switch Technologies**Djurre Wikkerink<sup>1</sup><sup>1</sup>Delft University of Technology, The Netherlands**2-LP-MR-S16****Room temperature Bp coil with Litz wire and AlN cooling disks for ULF-MRI**Seong-min Hwang<sup>1</sup>, Jeong-Hyun Shim<sup>1</sup>, Ingo Hilschenz<sup>1</sup>, Seong-Joo Lee<sup>1</sup>, Kiwoong Kim<sup>1</sup><sup>1</sup>Korea Research Institute of Standards and Science, South Korea**2-LP-MR-S17****Development of Cryogen-free Superconducting Magnet for 230 MeV Proton Cyclotron**Takemasa Tsurudome<sup>1</sup>, Jun Yoshida<sup>1</sup>, Masayuki Hirabayashi<sup>2</sup>, Hiroshi Tsutsui<sup>2</sup>, Atsushi Hashimoto<sup>1</sup>, Yoshihiko Arakawa<sup>1</sup>, Yuta Ebara<sup>1</sup>, Takaaki Morie<sup>1</sup>, Hitoshi Mitsubori<sup>1</sup>, Kazuya Taki<sup>2</sup>, Hiroshi Ookubo<sup>1</sup>, Yukio Mikami<sup>1</sup>, Yukio Kumata<sup>1</sup><sup>1</sup>Sumitomo Heavy Industries, Ltd. Technology Research Center, Japan<sup>2</sup>Sumitomo Heavy Industries, Ltd. Industrial Equipment Division, Japan

**2-LP-RF - Superconducting RF**

Chairs: Rama Calaga, CERN and Sergio Calatroni, CERN

**2-LP-RF-I01****A GdBCO bulk staggered array undulator**

Marco Calvi<sup>1</sup>, Mark D. Ainslie<sup>2</sup>, Anthony Dennis<sup>2</sup>, John H. Durrell<sup>2</sup>, Sebastian Hellmann<sup>1</sup>, Thomas Schmidt<sup>1</sup>, Yunhua Shi<sup>2</sup>, Kai Zhang<sup>1</sup>

<sup>1</sup>Paul Scherrer Institute, Switzerland<sup>2</sup>University of Cambridge, United Kingdom**2-LP-RF-S02****RF surface resistance of REBCO coated conductors for the FCC beam screen coating**

Artur Romanov<sup>1</sup>, Joffre Gutierrez<sup>1</sup>, Patrick Krkotic<sup>2</sup>, Joan O'Callaghan<sup>3</sup>, Montse Pont<sup>2</sup>, Francis Perez<sup>2</sup>, Xavier Granados<sup>1</sup>, Mauro Taborelli<sup>4</sup>, Sergio Calatroni<sup>4</sup>, Teresa Puig<sup>1</sup>

<sup>1</sup>ICMAB-CSIC, Spain<sup>2</sup>ALBA synchrotron light source, Spain<sup>3</sup>Universitat Politècnica de Catalunya, Spain<sup>4</sup>CERN, Switzerland**2-LP-RF-S03****Surface resistance and reactance trapped flux sensitivity of 6GHz cavities**

Ruggero Vaglio<sup>1</sup>, Antonio Cassinese<sup>1</sup>, Vanessa Garcia<sup>2</sup>, Cristian Pira<sup>2</sup>, Luca Zanotto<sup>2</sup>

<sup>1</sup>Dipartimento di Fisica - Università di Napoli Federico II, Italy<sup>2</sup>INFN LNL, Italy**2-LP-RF-S04****Improvement of End Field Profile of Bulk HTS Undulator**Toshiteru Kii<sup>1</sup><sup>1</sup>Institute of Advanced Energy, Kyoto University, Japan**2-LP-RF-S05****RF Power Dependent Anomalous NRMA in Nano Nickel added YBCO Powers**

Fhulufhelo Nemangwele<sup>1</sup>, Srinivasu V. Vallabhapurapu<sup>2</sup>

<sup>1</sup>University of Venda, South Africa<sup>2</sup>University of South Africa, South Africa**2-LP-SMA - Superconducting Machines**

Chairs: Maria Sparing, IFW Dresden, Leibniz Institute for Solid State and Materials Research, Institute for Metallic Materials and Koki Ochiai, Keio University Graduate School of Science and Technology

**2-LP-SMA-I01****Electromagnetic Design of Fully Superconducting Generators for Aviation Systems**

Yutaka Terao<sup>1</sup>, Daniel Heideman<sup>1</sup>, Hiroyuki Ohsaki<sup>1</sup>

<sup>1</sup>University of Tokyo, Japan

**2-LP-SMA-I02****Superconducting Halbach Array Field Winding for Synchronous Machines**Markus Mueller<sup>1</sup>, Quan Li<sup>1</sup>, Hongye Zhang<sup>1</sup><sup>1</sup>University of Edinburgh, United Kingdom**2-LP-SMA-I03****Development of 1 kW fully-superconducting synchronous motor with REBCO wires**Hiromasa Sasa<sup>1</sup>, Masataka Iwakuma<sup>1</sup>, Shun Miura<sup>1</sup>, Masataka Komiya<sup>1</sup>, Takuya Aikawa<sup>1</sup>, Teruyoshi Sasayama<sup>1</sup>, Takashi Yoshida<sup>1</sup>, Kaoru Yamamoto<sup>1</sup>, Teruo Izumi<sup>2</sup>, Akira Tomioka<sup>3</sup>, Masayuki Konno<sup>3</sup>, Takahiro Umeno<sup>4</sup><sup>1</sup>Kyushu University, Japan<sup>2</sup>National Institute of Advanced Industrial Science and Technology, Japan<sup>3</sup>Fuji Electric Co. Ltd., Japan<sup>4</sup>Taiyo Nippon Sanso Corporation, Japan**2-LP-SMA-I04****Electromagnetic Design of 2 MW Fully-Superconducting Synchronous Motors**Ryota Sugochi<sup>1</sup>, Takuya Aikawa<sup>1</sup>, Masataka Komiya<sup>1</sup>, Shun Miura<sup>1</sup>, Masataka Iwakuma<sup>1</sup>, Koichi Yoshida<sup>1</sup>, Teruyoshi Sasayama<sup>1</sup>, Kaoru Yamamoto<sup>1</sup>, Akira Tomioka<sup>2</sup>, Masayukii Konno<sup>2</sup>, Teruo Izumi<sup>3</sup><sup>1</sup>Kyushu University, Japan<sup>2</sup>Fuji Electric, Japan<sup>3</sup>National Institute of Advanced Industrial Science and Technology, AIST, Japan**2-LP-SMA-I05****Electromagnetic design of 100 kW-class induction motors with HTS tapes**Yuma Doi<sup>1</sup>, Koichiro Ozaki<sup>1</sup>, Koichi Yoshida<sup>1</sup>, Shun Miura<sup>1</sup>, Teruyoshi Sasayama<sup>1</sup>, Takashi Yoshida<sup>1</sup>, Masataka Iwakuma<sup>1</sup>, Akira Tomioka<sup>2</sup>, Masayuki Konno<sup>2</sup>, Teruo Izumi<sup>3</sup><sup>1</sup>Kyushu University, Japan<sup>2</sup>Fuji Electric Co. Ltd., Japan<sup>3</sup>AIST, Japan**2-LP-SMA-I06****Design of the coil for the Pulsed Field Magnetization of a bulk HTS motor**Jakub Kapek<sup>1</sup>, Kévin Berger<sup>1</sup>, Erasmus Shaanika<sup>2</sup>, Tetsuya Ida<sup>2</sup>, Mitsuru Izumi<sup>2</sup>, Jean Lévéque<sup>1</sup><sup>1</sup>GREEN - Université de Lorraine, Faculté des Sciences et Technologies, France<sup>2</sup>Tokyo University of Marine Science and Technology, Japan**2-LP-SMA-S07****Modelling an HTS dynamo using a segregated finite-element model**Mark Ainslie<sup>1</sup>, Loïc Quéval<sup>2</sup>, Ratu Mataira<sup>3</sup>, Chris Bumby<sup>3</sup>, Rod Badcock<sup>3</sup><sup>1</sup>Department of Engineering, University of Cambridge, United Kingdom<sup>2</sup>University of Paris-Saclay, France<sup>3</sup>Robinson Research Institute, Victoria University of Wellington, New Zealand

**2-LP-SMA-S08****Trapped-flux magnets characterization for application in synchronous machines**

Vicente Clemente-Alarcon<sup>1</sup>, Anis Smara<sup>1</sup>, Nikolay Mineev<sup>1</sup>, Lukasz Tomkow<sup>1</sup>, Bartek Glowacki<sup>1</sup>, Thomas Reis<sup>2</sup>

<sup>1</sup>University of Cambridge, United Kingdom

<sup>2</sup>Oswald Elektromotoren GmbH, Germany

**2-LP-SMA-S09****Design of FRP Components for the Oil-cooling Air-core Stator of an HTS Motor**

Yong Zhou<sup>1</sup>, Yang Xiao<sup>1</sup>, Sisi Peng<sup>1</sup>, Linke Yang<sup>2</sup>, Ruiguang Xie<sup>2</sup>

<sup>1</sup>Wuhan Institute of Marine Electric Propulsion, China

<sup>2</sup>Xi'an Kangben Material Co., Ltd., China

**2-LP-SMA-S10****Principal analysis of hybrid power systems with HTS electrical machines**

Konstantin Kovalev<sup>1</sup>, Roman Ilyasov<sup>1</sup>, Nicolay Ivanov<sup>1</sup>, Dmitriy Dezhin<sup>1</sup>, Vladimir Penkin<sup>1</sup>, Boris Zechihin<sup>1</sup>

<sup>1</sup>Moscow Aviation Institute, Russia

**2-LP-SMA-S11****Measured coupling AC loss in external fields of a stator coil for aircraft motor**

Jan Kovac<sup>1</sup>, Enric Pardo<sup>1</sup>, Michal Vojenciak<sup>1</sup>, Shuo Li<sup>2</sup>, Eva Berberich<sup>3</sup>, Thomas Reis<sup>3</sup>

<sup>1</sup>Institute of Electrical Engineering, Slovak Academy of Sciences, Slovakia

<sup>2</sup>Institute of Electrical Engineering, Slovak Academy of Sciences, College of Information Science and Engineering, Northeastern University, Shenyang, Slovakia

<sup>3</sup>Oswald Elektromotoren GmbH, Germany

**2-LP-SMA-S12****Dynamic loss analysis of superconducting generators**

Kevin Kails<sup>1</sup>, Philip Machura<sup>1</sup>, Min Yao<sup>1</sup>, Hongye Zhang<sup>1</sup>, Quan Li<sup>1</sup>, Markus Mueller<sup>1</sup>

<sup>1</sup>University of Edinburgh, United Kingdom

**2-LP-SMA-S13****AC losses test of HTS racetrack coils for HTS motor winding**

Sergey Zanegin<sup>1</sup>, Nikolay Ivanov<sup>2</sup>, Dmitry Shishov<sup>2</sup>, Ivan Shishov<sup>2</sup>, Konstantin Kovalev<sup>2</sup>, Vasily Zubko<sup>3</sup>

<sup>1</sup>Moscow Aviation Institute, JSC VNIIKP, Russia

<sup>2</sup>Moscow Aviation Institute, Russia

<sup>3</sup>JSC VNIIKP, Russia

**2-LP-SMA-S14****Excitation characteristics of MgB2 race track coil immersed in liquid hydrogen**

Yoshiki Iwami<sup>1</sup>, Taito Matsumoto<sup>1</sup>, Shintaro Hara<sup>1</sup>, Yasuyuki Shirai<sup>1</sup>, Masahiro Shiotsu<sup>1</sup>, Hiroaki Kobayashi<sup>2</sup>, Yoshihiro Naruo<sup>2</sup>, Yoshikumi Inatani<sup>2</sup>, Satoshi Nonaka<sup>2</sup>, Hideki Tanaka<sup>3</sup>, Motomune Kodama<sup>3</sup>, Takaaki Suzuki<sup>3</sup>

<sup>1</sup>Kyoto University, Japan

<sup>2</sup>JAXA, Japan

<sup>3</sup>Hitachi,Ltd, Japan



**2-LP-SMA-S15****Evaluation of closed-magnetizing system for HTS rotating machine**Keita Tsuzuki<sup>1</sup><sup>1</sup>Department of Information and Computer Engineering/National Institute of Technology, Toyota College, Japan**2-LP-SMA-S16****Critical current measurement in HTS stator armature coils for AC machines**Pawel Lasek<sup>1</sup>, Mariusz Stepien<sup>1</sup>, Krzysztof Habelok<sup>1</sup><sup>1</sup>Silesian University of Technology, Poland**2-LP-SMA-S17****Study of 10 MW HTS Flux modulation Generators with Different Armature Windings**Yi Cheng<sup>1</sup><sup>1</sup>Huazhong University of Science and Technology, China**2-LP-SMA-S18****Small-scale prototype of a Fully HTS-2G six-phase inductor electrical machine**Roman Ilyasov<sup>1</sup>, Dmitriy Dezhin<sup>1</sup>, Irina Dezhina<sup>1</sup>, Konstantin Kovalev<sup>1</sup>, Gennady Kuznetsov<sup>1</sup>, Denis Rusanov<sup>1</sup><sup>1</sup>Moscow Aviation Institute (National Research University), Russia**2-LP-SMA-S19****The Oil Cooling Design and Test for Air-core stator of an HTS Motor**Qi Dong<sup>1</sup>, Yong Zhou<sup>1</sup>, Xiaojun Niu<sup>1</sup><sup>1</sup>Wuhan Institute of Marine Electric Propulsion,CSIC, China**2-LP-SMA-S20****YBCO Racetrack Coil for an HTS Synchronous Motor with Brushless Exciter**Wei Wang<sup>1</sup><sup>1</sup>Sichuan University, China**2-LP-SMA-S21****Winding configurations and ac loss of Superconducting Synchronous REBCO Motors**Akifumi Kawagoe<sup>1</sup>, Ryota Kanemaru<sup>1</sup>, Kazuma Kudou<sup>1</sup>, Masataka Iwakuma<sup>2</sup>, Masayuki Konno<sup>3</sup>, Akira Tomioka<sup>3</sup>, Tero Izumi<sup>4</sup><sup>1</sup>Kagoshima University,<sup>2</sup>Kyushu University, Japan<sup>3</sup>Fuji Electric Co., Ltd., Japan<sup>4</sup>AIST, Japan**2-LP-SMA-S23****Measurement and analysis of transverse flux linear HTS motor**Krzysztof Habelok<sup>1</sup>, Pawel Lasek<sup>1</sup>, Mariusz Stepien<sup>1</sup><sup>1</sup>Silesian University of Technology, Poland

**2-LP-SMA-S24****Design and Analysis of an HTS Synchronous Motor with a Hybrid Magnets Rotor**Zhen Huang<sup>1</sup><sup>1</sup>Shanghai Jiao Tong University, China**2-LP-SMA-S25****Superconducting Propulsion System with LH2 Cooling for All-Electric Aircraft**Dmitry Dezhin<sup>1</sup>, Roman Ilyasov<sup>1</sup>, Irina Dezhina<sup>1</sup><sup>1</sup>Moscow Aviation Institute (National Research University), Russia

and Koki Ochiai, Keio University Graduate School of Science and Technology

**2-LP-SMA-S26****Topology comparison of superconducting AC machines for hybrid-electric aircraft**Martin Boll<sup>1</sup>, Matthias Corduan<sup>1</sup>, Mykhaylo Filipenko<sup>1</sup>, Marijn Pieter Oomen<sup>2</sup>, Mabroor Ahmed<sup>1</sup>, Mathias Noe<sup>3</sup><sup>1</sup>Siemens AG, Corporate Technology- eAircraft, Germany<sup>2</sup>Siemens AG, Corporate Technology, Germany<sup>3</sup>Karlsruhe Institute of Technology, Institute for Technical Physics, Germany**2-LP-SMA-S27****Coupling loss modelling for soldered HTS stacks and multi-tape-conductor coil**Shuo Li<sup>1</sup>, Enric Pardo<sup>1</sup>, Ján Kováč<sup>1</sup>, Michal Vojenčík<sup>1</sup>, Eva Berberich<sup>2</sup>, Thomas Reis<sup>2</sup><sup>1</sup>Institute of Electrical Engineering, Slovak Academy of Sciences, Slovakia<sup>2</sup>Oswald Elektromotoren GmbH, Germany**2-MP-BK2 - Bulk Materials 2**

Chair: Kai Yuan (Danny) Huang, University of Cambridge

TUESDAY

**2-MP-BK2-I01****Numerical optimisation of ring reinforcements for GdBCO-Ag bulk superconductors**Dominic Barthlott<sup>1</sup>, Kaiyuan Huang<sup>2</sup>, John Durrell<sup>2</sup>, David Cardwell<sup>2</sup>, Bernhard Holzapfel<sup>3</sup>, Mark Ainslie<sup>2</sup><sup>1</sup>Karlsruhe Institute of Technology (KIT), Germany<sup>2</sup>University of Cambridge, Department of Engineering,<sup>3</sup>Karlsruhe Institute of Technology, Institute of Technical Physics, Germany**2-MP-BK2-I02****Microstructural Characterization of MgB2 superconductors for operation at 27 K**Laura Wheatley<sup>1</sup>, Zilin Gao<sup>1</sup>, Guillaume Matthews<sup>1</sup>, Edwin Eardley<sup>2</sup>, Chris Wort<sup>2</sup>, Matthew Hills<sup>3</sup>, Tom Bradshaw<sup>3</sup>, Chris Grovenor<sup>1</sup>, Susannah Speller<sup>1</sup><sup>1</sup>University of Oxford, United Kingdom<sup>2</sup>Element Six, Global Innovation Centre, United Kingdom<sup>3</sup>Science and Technology Facilities Council, United Kingdom

**2-MP-BK2-I03****Dynamic mechanical response in bulk superconductors**Huadong Yong<sup>1</sup>, Yanyun Ru<sup>1</sup>, Youhe Zhou<sup>1</sup><sup>1</sup>Lanzhou University, China**2-MP-BK2-I04****The growth and superconducting properties of (Gd-Y)BCO single grains**Yunhua Shi<sup>1</sup><sup>1</sup>Engineering Department, University of Cambridge, United Kingdom**2-MP-BK2-S05****Field and temperature dependent critical current density in composite systems**Ajay Kumar Ghosh<sup>1</sup><sup>1</sup>Jadavpur University, India**2-MP-BK2-S06****Effect of Graphene Oxide and Reduced Graphene Oxide doping on Bulk YBCO**Mohammed Zaahid Gaffoor<sup>1</sup>, Alan Lawrence Leigh Jarvis<sup>1</sup><sup>1</sup>University of Kwa Zulu Natal, South Africa**2-MP-BK2-S07****Effects of Nd<sub>2</sub>O<sub>3</sub> and TiO<sub>2</sub> addition on YBCO bulk superconductors grown by TSIG**Fahad Alzaid<sup>1</sup>, Devendra Namburi<sup>2</sup>, Yunhua Shi<sup>2</sup>, Anthony Dennis<sup>2</sup>, Maha Khayyat<sup>1</sup>, Bandar Alotaibi<sup>1</sup>, David Cardwell<sup>2</sup>, John Durrell<sup>2</sup><sup>1</sup>Center of Excellence for Advanced Materials and Manufacturing, King Abdulaziz City for Science and Technology, Saudi Arabia<sup>2</sup>Department of Engineering, University of Cambridge, United Kingdom**2-MP-BK2-S08****Pulsed field magnetization of ring and assembled bulk superconductors**Difan Zhou<sup>1</sup>, Yunhua Shi<sup>2</sup>, Anthony Dennis<sup>2</sup>, David Cardwell<sup>2</sup>, John Durrell<sup>2</sup><sup>1</sup>Department of Physics, Shanghai University, China and Department of Engineering, University of Cambridge, United Kingdom<sup>2</sup>Department of Engineering, University of Cambridge, United Kingdom**2-MP-BK2-S09****Excess Conductivity and magneto conductivity of nano NiO/Sm-123 composite**Hadi Basma<sup>1</sup>, Sajida Rmeid<sup>1</sup>, Ramadan Awad<sup>1</sup><sup>1</sup>Beirut Arab University, Lebanon**2-MP-BK2-S10****Improvement of trapped magnetic field by waveform control pulse magnetization**Tetsuya Ida<sup>1</sup>, Masahiro Watasaki<sup>2</sup>, Mitsuru Izumi<sup>1</sup><sup>1</sup>Tokyo University of Marine Science and Technology, Japan<sup>2</sup>National Institute of Technology, Hiroshima College, Japan

**2-MP-BK2-S11****Simulation of mechanical stress in ReBaCuO disk bulk magnetized by pulsed-field**

Fumiya Shimoyashiki<sup>1</sup>, Hiroyuki Fujishiro<sup>2</sup>, Tatsuya Hirano<sup>1</sup>, Tomoyuki Naito<sup>1</sup>, Mark D. Ainslie<sup>3</sup>

<sup>1</sup>Department of Physical Science and Materials Engineering, Faculty of Science and Engineering, Iwate University, Japan

<sup>2</sup>Faculty of Science and Engineering, Japan

<sup>3</sup>Bulk Superconductivity Group, Department of Engineering, University of Cambridge, United Kingdom

**2-MP-BK2-S12****Simulation of mechanical stress in REBaCuO ring bulk magnetized by pulsed-field**

Tatsuya Hirano<sup>1</sup>, Hiroyuki Fujishiro<sup>1</sup>, Tomoyuki Naito<sup>1</sup>, Mark D. Ainslie<sup>2</sup>

<sup>1</sup>Department of Physical Science and Materials Engineering, Faculty of Science and Engineering, Iwate University, Japan

<sup>2</sup>Bulk Superconductivity Group, Department of Engineering, University of Cambridge, United Kingdom

**2-MP-BK2-S13****Trapped field of two close bulk superconductors with misaligned c-axes**

Michel Houbart<sup>1</sup>

<sup>1</sup>University of Liège, Belgium

**2-MP-CC2 - Coated Conductors 2**

Chairs: Albert Queraltó, ICMAB-CSIC

**2-MP-CC2-I01****Study of hetero junction between RE123 and Bi2223 tapes with JIM method**

Shintetsu Kanazawa<sup>1</sup>

<sup>1</sup>Muroran Institute of Technology, Japan

**2-MP-CC2-I02****Low-temperature superconducting joints of REBCO-CCs without oxygenation anneal**

Shuhei Funaki<sup>1</sup>, Yugo Miyachi<sup>1</sup>, Yasuji Yamada<sup>1</sup>

<sup>1</sup>Shimane University, Japan

**2-MP-CC2-I03****Ultra-high field HTS coated tapes under magnetic field / temperature gradients**

Alexander Usoskin<sup>1</sup>, Johannes Grilisen<sup>2</sup>, Michael Eisterer<sup>3</sup>, Ulrich Betz<sup>1</sup>, Klaus Schlenga<sup>1</sup>

<sup>1</sup>Bruker HTS GmbH, Germany

<sup>2</sup>Bruker HTS GmbH, Germany and TU-Wien, Austria

<sup>3</sup>Atominstutut, TU Wien, Austria

**2-MP-CC2-S04****In-depth resistance analysis of REBCO tape joints with indium insert and solders**

Ryoichiro Hayasaka<sup>1</sup>, Satoshi Ito<sup>1</sup>, Takeharu Kato<sup>2</sup>, Daisaku Yokoe<sup>2</sup>, Hidetoshi Hashizume<sup>1</sup>

<sup>1</sup>Department of Quantum Science and Energy Engineering, Graduate School of Engineering, Tohoku University, Japan

<sup>2</sup>Japan Fine Ceramics Center, Japan

**2-MP-CC2-S05****Effect of Interfacial Resistance at 2G Superconductor-stabilizer layer**Abhinav Kumar<sup>1</sup><sup>1</sup>School of Mechanical Engineering, India**2-MP-CC2-S06****Low resistance joint of YGdBCO coated conductors using nano-silver pastes**Gansong Yang<sup>1</sup>, Lian Liu<sup>1</sup>, Wentao Wang<sup>1</sup>, Zhengjian Tian<sup>1</sup>, Mingjiang Wang<sup>2</sup>, Xue Yang<sup>1</sup>, Baolei Huo<sup>1</sup>, Yong Zhao<sup>3</sup><sup>1</sup>Key Laboratory of Advanced Technologies of Materials (Ministry of Education of China), School of Materials Science and Engineering, Southwest Jiaotong University, Key Laboratory of Magnetic Levitation and Maglev Trains (Ministry of Education of China), China<sup>2</sup>Key Laboratory of Magnetic Levitation and Maglev Trains (Ministry of Education of China), School of Electrical Engineering, Southwest Jiaotong University, China<sup>3</sup>Key Laboratory of Magnetic Levitation and Maglev Trains (Ministry of Education of China), School of Electrical Engineering, Southwest Jiaotong University, College of Physics and Energy, Fujian Normal University, China**2-MP-CC2-S07****The effect of magnetization on current distribution of an YBCO Core Cable**Rujing Liu<sup>1</sup>, Wenjiang Yang<sup>1</sup>, Dongbin Song<sup>1</sup>, Jiahui Zhu<sup>2</sup>, Huiming Zhang<sup>2</sup><sup>1</sup>Beihang University, China<sup>2</sup>The China Electric Power Research Institute, China**2-MP-CC2-S08****Development of YBa<sub>2</sub>Cu<sub>3</sub>O<sub>7</sub> coated conductors using an electromagnetic steel tape**Naho Terao<sup>1</sup>, Kotaro Higuchi<sup>1</sup>, Shigeru Horii<sup>1</sup>, Ataru Ichinose<sup>2</sup>, Toshiya Doi<sup>1</sup><sup>1</sup>Kyoto University, Japan<sup>2</sup>Central Research Institute of Electric Power Industry, Japan**2-MP-CC2-S09****Inter- and Intra-CuO-planar Jc and Biaxial Strain Measurements on ISD REBCO**Charles Gurnham<sup>1</sup>, Veit Große<sup>2</sup>, Damian Hampshire<sup>1</sup><sup>1</sup>Department of Physics, Superconductivity Group, Durham University, United Kingdom<sup>2</sup>THEVA Dünnschichttechnik GmbH, Germany**2-MP-CC2-S10****Shielded Region in HTS Coated Conductors**Quan Li<sup>1</sup>, Hongye Zhang<sup>1</sup>, Min Yao<sup>1</sup>, Zhenan Jiang<sup>2</sup>, Ying Xin<sup>3</sup><sup>1</sup>University of Edinburgh, United Kingdom<sup>2</sup>Victoria University of Wellington, New Zealand<sup>3</sup>Tianjin University, China**2-MP-CC2-S11****Low cost transposed cables made with 1G NX and REBCO 2G HTS tapes for coils**Alexander Otto<sup>1</sup><sup>1</sup>Solid Material Solutions, LLC, United States of America

**2-MP-CC2-S12**

**Growth of ReBCO films by quantitative evaporation PVD on ISD-MgO buffered tapes**

Oleksiy Troshyn<sup>1</sup>, Christian Hoffmann<sup>2</sup>, Veit Große<sup>1</sup>, Bernhard Holzapfel<sup>3</sup>, Jens Hänsch<sup>3</sup>

<sup>1</sup>THEVA Dünnenschichttechnik GmbH, Germany

<sup>2</sup>Ceraco Ceramic Coating GmbH, Germany

<sup>3</sup>Institute for Technical Physics, Karlsruhe Institute of Technology, Germany

**2-MP-CC2-S13**

**Growth rate tuned flux pinning in YBCO films grown on IBAD-MgO based template**

Hannu Huhtinen<sup>1</sup>, Elmeri Rivasto<sup>2</sup>, Mukarram Khan<sup>1</sup>, Heikki Palonen<sup>1</sup>, Y. Zhao<sup>2</sup>, C. Chen<sup>3</sup>, J. Zhu<sup>3</sup>, Petriina Paturi<sup>1</sup>

<sup>1</sup>Wihuri Physical Laboratory, Department of Physics and Astronomy, University of Turku, Finland

<sup>2</sup>Department of Electrical Engineering, Shanghai Jiao Tong University, China

<sup>3</sup>Shanghai Superconductor Technology Co. Ltd., China

**2-MP-CC2-S14**

**Hysteretic losses of superconducting tape wires in large magnetic fields**

Yasunori Mawatari<sup>1</sup>, Yoichi Higashi<sup>1</sup>

<sup>1</sup>National Institute of Advanced Industrial Science and Technology (AIST), Japan

**2-MP-FP3 - Critical Current and Flux Pinning 3**

Chairs: Daniel Kagerbauer, Atominstitut, TU Wien and Nicola Pompeo, University Roma Tre

**2-MP-FP3-S02**

**Material Law Impact on the Electromagnetic Properties of 2G-HTS Racetrack Coils**

Bright Robert<sup>1</sup>, Muhammad Fareed<sup>1</sup>, Harold Ruiz<sup>1</sup>

<sup>1</sup>University of Leicester, United Kingdom

**2-MP-FP3-S03**

**Magnetic coupling in Superconductor-Ferromagnet heterostructures**

Marinela Alina Ionescu<sup>1</sup>, Julian Simmendinger<sup>1</sup>, Manuel Bihler<sup>1</sup>, Gisela Schütz<sup>1</sup>, Joachim Albrecht<sup>2</sup>

<sup>1</sup>Max Planck Institute for Intelligent Systems, Germany

<sup>2</sup>Research Institute for Innovative Surfaces FINO, Germany

**2-MP-FP3-S04**

**Resistive state during vortex motion in mesoscopic superconductors**

Elwís Duarte<sup>1</sup>, Edson Sardella<sup>1</sup>, Rafael Zadorosny<sup>1</sup>

<sup>1</sup>UNESP, Brazil

**2-MP-FP3-S05**

**Magnetic flux penetration into micron-sized superconductor/ferromagnet bilayers**

Julian Simmendinger<sup>1</sup>, Gisela Schütz<sup>1</sup>, Joachim Albrecht<sup>2</sup>

<sup>1</sup>Max Planck Institute for Intelligent Systems, Germany

<sup>2</sup>Research Institute for Innovative Surfaces FINO, Germany

**2-MP-FP3-S06****Influence of thermal gradients on the vortex dynamics and pinning**

Elwís Duarte<sup>1</sup>, Alice Presotto<sup>1</sup>, Danilo Okimoto<sup>1</sup>, Vinícius Souto<sup>1</sup>, Edson Sardella<sup>2</sup>, Rafael Zadorosny<sup>3</sup>

<sup>1</sup>São Paulo State University (UNESP), School of Engineering, Brazil

<sup>2</sup>São Paulo State University (UNESP), School of Sciences, Brazil

<sup>3</sup>São Paulo State University (UNESP), School of Engineering, São Paulo State University (UNESP), School of Sciences, Brazil

**2-MP-FP3-S07****Superconducting transport properties of thin Co-doped BaFeAs film and nanowire**

Pusheng Yuan<sup>1</sup>, Wei Zhang<sup>1</sup>

<sup>1</sup>Shanghai Institute of Microsystem and Information Technology (SIMIT), Chinese Academy of Sciences, China

**2-MP-FP3-S08****Correlation between first flux entry field and surface roughness of Nb samples**

Rastislav Ries<sup>1</sup>, Eugen Seiler<sup>1</sup>, Arturs Medvids<sup>2</sup>, Oleg B Malyshov<sup>3</sup>, Reza Valizadeh<sup>3</sup>, Cristian Pira<sup>4</sup>, Michael Vogel<sup>5</sup>, Stewart Leith<sup>5</sup>, Xin Jiang<sup>5</sup>, Alban Sublet<sup>6</sup>, Claire Z Antoine<sup>7</sup>, Oliver Kugeler<sup>8</sup>

<sup>1</sup>Institute of Electrical Engineering SAS, Slovakia

<sup>2</sup>Riga Technical University, Latvia

<sup>3</sup>Science and Technology Facilities Council, United Kingdom

<sup>4</sup>INFN - Istituto Nazionale di Fisica Nucleare, Italy

<sup>5</sup>Institute of Materials Engineering, University of Siegen, Germany

<sup>6</sup>CERN, Switzerland

<sup>7</sup>Atomic Energy and Alternative Energies Commission, France

<sup>8</sup>Helmholtz-Zentrum Berlin, Germany

**2-MP-FP3-S09****MgB<sub>2</sub>-based materials with high critical currents and flux pinning**

Tetiana Prikhna<sup>1</sup>, Michael Eisterer<sup>2</sup>, Vitaliy Romaka<sup>3</sup>, Semyon Ponomarov<sup>4</sup>

<sup>1</sup>Institute for Superhard Materials of the National Academy of Sciences of Ukraine, Ukraine

<sup>2</sup>Atominstitut, TU Wien, Austria

<sup>3</sup>Lviv Polytechnic National University, Ukraine

<sup>4</sup>Institute of Semiconductor Physics of the National Academy of Sciences of Ukraine (NASU), Ukraine

**2-MP-FP3-S10****Electromechanical properties of iron-based superconducting tapes**

Chao Tian<sup>1</sup>, Huajun Liu<sup>1</sup>, Fang Liu<sup>1</sup>, Yi Shi<sup>1</sup>

<sup>1</sup>Institute of Plasma Physics Chinese Academy of Sciences, China

**2-MP-FP3-S11****A peak in critical current density of Ni-Ba122**

Gabriel Bieletti<sup>1</sup>, Grant V M Williams<sup>2</sup>, Michael A Susner<sup>3</sup>, David M Uhrig<sup>1</sup>, Shen V Chong<sup>1</sup>

<sup>1</sup>Robinson Research Institute, Victoria University of Wellington, School of Chemical and Physical Sciences, Victoria University of Wellington, MacDiarmid Institute for Advanced Materials and Nanotechnology, New Zealand

<sup>2</sup>School of Chemical and Physical Sciences, Victoria University of Wellington, MacDiarmid Institute for Advanced Materials and Nanotechnology, Victoria University of Wellington, New Zealand

<sup>3</sup>The Air Force Research Laboratory, United States of America



**2-MP-FP3-S12****Microwave investigation of pinning and flux flow in Te- and cubic-BN- added MgB2**

Andrea Alimenti<sup>1</sup>, Kostiantyn Torokhtii<sup>1</sup>, Mihai Grigorescu<sup>2</sup>, Petre Badica<sup>2</sup>, Adrian Crisan<sup>2</sup>, Enrico Silva<sup>1</sup>, Nicola Pompeo<sup>1</sup>

<sup>1</sup>Department of Engineering, Università Roma Tre, Italy

<sup>2</sup>National Institute of Materials Physics, Romania

**2-MP-FP3-S13****Electron irradiation of bulk FeSe superconductors**

Quentin Nouailhetas<sup>1</sup>, Kévin Berger<sup>1</sup>, Bruno Douine<sup>1</sup>, Xian Lin Zeng<sup>2</sup>, Anjela Koblischka-Veneva<sup>3</sup>, Michael Koblischka<sup>3</sup>, Miryala Muralidhar<sup>4</sup>, Kees van der Beek<sup>5</sup>

<sup>1</sup>GREEN - Université de Lorraine, Faculté des Sciences et Technologies, France

<sup>2</sup>Experimental Physics, Saarland University, Germany

<sup>3</sup>Experimental Physics, Saarland University, Germany, Department of Materials Science and Engineering, Shibaura Institute of Technology, Japan,

<sup>4</sup>Department of Materials Science and Engineering, Shibaura Institute of Technology, Japan

<sup>5</sup>Laboratoire des Solides Irradiés, Ecole Polytechnique, CNRS, CEA, Université Paris-Saclay, France

**2-MP-FP3-S14****Trapped field properties of large MgB2 bulk fabricated by infiltration method**

Yuhei Takahashi<sup>1</sup>, Tomoyuki Naito<sup>1</sup>, Hiroyuki Fujishiro<sup>1</sup>

<sup>1</sup>Faculty of Science and Engineering, Iwate university, Japan

**2-MP-FP3-S15****Scaling analyses on the critical current density in MgB2/NbN/Si thin film**

Akihiko Nishida<sup>1</sup>, Chihiro Taka<sup>1</sup>, Stefan Chromik<sup>2</sup>

<sup>1</sup>Fukuoka University, Japan

<sup>2</sup>Slovak Academy of Sciences, Slovakia

**2-MP-NB - Nb-based Materials**

Chairs: Chris Grovenor, and Florin Buta, University of Geneva

**2-MP-NB-I01****Homogeneity of Nb3Sn wires with artificial pinning centers**

Mattia Ortino<sup>1</sup>, Thomas Baumgartner<sup>1</sup>, Stephan Pfeiffer<sup>2</sup>, Xingchen Xu<sup>3</sup>, Xuan Peng<sup>4</sup>, Mike Sumption<sup>5</sup>, Johannes Bernardi<sup>2</sup>, Michael Eisterer<sup>1</sup>

<sup>1</sup>Atominstitut, TU Wien, Austria

<sup>2</sup>USTEM, TU Wien, Austria

<sup>3</sup>Fermi National Accelerator Laboratory, United States of America

<sup>4</sup>Hyper Tech Research Inc., United States of America

<sup>5</sup>Center for Superconducting and Magnetic Materials, Department of Materials Science and Engineering, The Ohio State University, United States of America

**2-MP-NB-I02****Homogeneity in Nb<sub>3</sub>Sn wires: a route towards high quality superconductors**

Alice Moros<sup>1</sup>, Mattia Ortino<sup>2</sup>, Stephan Pfeiffer<sup>1</sup>, Stefan Löffler<sup>1</sup>, Maxim Alekseev<sup>3</sup>, Anastasia Tsapleva<sup>3</sup>, Pavel Lukyanov<sup>3</sup>, Ildar M. Abdyukhanov<sup>3</sup>, Victor Pantyrny<sup>3</sup>, Bernardo Bordini<sup>4</sup>, Amalia Ballarino<sup>4</sup>, Simon C. Hopkins<sup>4</sup>, Michael Stöger-Pollach<sup>1</sup>, Johannes Bernardi<sup>1</sup>, Michael Eisterer<sup>2</sup>

<sup>1</sup>TU Wien - USTEM, Austria

<sup>2</sup>TU Wien - Atominstiut, Austria

<sup>3</sup>A. A. Bochvar High-Technology Research Institute on Inorganic Materials, Russia

<sup>4</sup>CERN, Switzerland

**2-MP-NB-I03****Effect of Zr doping of bronze matrix on the Nb<sub>3</sub>Sn formation in Nb/Cu-Sn wires**

Irina Deryagina<sup>1</sup>, Elena Popova<sup>1</sup>, Evgeny Patrakov<sup>1</sup>

<sup>1</sup>M.N. Miheev Institute of Metal Physics, Ural Branch, Russian Academy of Sciences, Russia

**2-MP-NB-S04****Importance of Nb-Ta-Hf rod microstructure on grain size and properties of Nb<sub>3</sub>Sn.**

Shreyas Balachandran<sup>1</sup>, Benjamin Walker<sup>1</sup>, Chiara Tarantini<sup>1</sup>, Nawaraj Paudel<sup>1</sup>, Peter Lee<sup>1</sup>, David Larbalestier<sup>1</sup>

<sup>1</sup>Applied Superconductivity Center, National High Magnetic Field Laboratory, Florida State University, United States of America

**2-MP-NB-S05****Mechanical properties for Nb<sub>3</sub>Al superconducting wires with Ta or Nb matrices**

Hidetoshi Oguro<sup>1</sup>, Sora Mochizuki<sup>1</sup>, Yuya Murakoshi<sup>1</sup>, Noriaki Abe<sup>1</sup>, Akihiro Kikuchi<sup>2</sup>, Satoshi Awaji<sup>3</sup>

<sup>1</sup>Tokai University, Japan

<sup>2</sup>National Institute for Materials Science, Japan

<sup>3</sup>Institute for Materials Research, Tohoku University, Japan

**2-MP-NB-S06****Nb<sub>3</sub>Al phase formation under different thermal heat treatments**

Yong Zhao<sup>1</sup>, Lian Xia<sup>2</sup>, Pingyuan Li<sup>2</sup>, Zhou Yu<sup>2</sup>, Xinsheng Yong<sup>2</sup>, Yongliang Chen<sup>2</sup>, Yong Zhang<sup>2</sup>, Xifeng Pan<sup>2</sup>, Guo Yan<sup>3</sup>, Yong Feng<sup>3</sup>, Cuihua Cheng<sup>4</sup>

<sup>1</sup>College of Physics and Energy, Fujian Normal University, China

<sup>2</sup>Southwest Jiaotong University, China

<sup>3</sup>Western Superconductivity Tech. Co. Ltd, China

<sup>4</sup>Fujian Normal University, China

**2-MP-NB-S07****Lead-free persistent mode joints between NbTi wires**

Timothy Davies<sup>1</sup>, Claire Saxby<sup>1</sup>, Tayebeh Mousavi<sup>1</sup>, Adrian Thomas<sup>2</sup>, M'hamed Lakrimi<sup>2</sup>, Chris Grovenor<sup>1</sup>, Susannah Speller<sup>1</sup>

<sup>1</sup>Department of Materials, University of Oxford, United Kingdom

<sup>2</sup>Siemens Magnet Technology, United Kingdom

**2-MP-NB-S08****Angular Dependence of the Upper Critical Field of ITER Nb-Ti Strands**

Simon Chislett-McDonald<sup>1</sup>, Michael Kovari<sup>2</sup>, Elizabeth Surrey<sup>2</sup>, Damian Hampshire<sup>1</sup>

<sup>1</sup>Superconductivity Group, Centre for Materials Physics, Department of Physics, Durham University, United Kingdom

<sup>2</sup>Culham Centre for Fusion Energy, Culham Science Centre, United Kingdom

**2-MP-NB-S09****High field evaluation of Nb3Sn wires at EMFL to refine the Kramer extrapolation**

Christopher Segal<sup>1</sup>, Jerome Fleiter<sup>2</sup>, Christian Barth<sup>2</sup>, Bernardo Bordini<sup>2</sup>, Amalia Ballarino<sup>2</sup>, Chiara Tarantini<sup>1</sup>, Peter Lee<sup>1</sup>, David Larbalestier<sup>1</sup>

<sup>1</sup>Applied Superconductivity Center, National High Magnetic Field Laboratory, Florida State University, United States of America

<sup>2</sup>CERN, Switzerland

**2-MP-NB-S10****Heat treatment optimization of bundle barrier Nb3Sn for the CERN Hi-Lumi upgrade**

Christopher Segal<sup>1</sup>, Simon Hopkins<sup>2</sup>, Bernardo Bordini<sup>2</sup>, Amalia Ballarino<sup>2</sup>, Chiara Tarantini<sup>1</sup>, Peter Lee<sup>1</sup>, David Larbalestier<sup>1</sup>

<sup>1</sup>Applied Superconductivity Center, National High Magnetic Field Laboratory, Florida State University, United States of America

<sup>2</sup>CERN, Switzerland

**2-MP-NB-I11****Impact of 440GeV Proton beams on Superconductors in a Cryogenic Environment**

Andreas Will<sup>1</sup>, Axel Bernhard<sup>2</sup>, Marco Bonura<sup>3</sup>, Matthijs Mentink<sup>4</sup>, Arnaud Monteuisse<sup>4</sup>, Anke-Susanne Mueller<sup>2</sup>, Andreas Oslandsbotn<sup>5</sup>, Carmine Senatore<sup>3</sup>, Ruediger Schmidt<sup>6</sup>, Jonathan Schubert<sup>4</sup>, Andrzej Siemko<sup>4</sup>, Krzysztof Stachon<sup>4</sup>, Arjan Verweij<sup>4</sup>, Daniel Wollmann<sup>4</sup>

<sup>1</sup>CERN, Switzerland and Karlsruhe Institute of Technology, Germany

<sup>2</sup>Karlsruhe Institute of Technology, Germany

<sup>3</sup>University of Geneva, Switzerland

<sup>4</sup>CERN, Switzerland

<sup>5</sup>Norwegian University of Science and Technology, Norway

<sup>6</sup>CERN and Technische Universität Darmstadt, Switzerland

**2-MP-NB-S12****Finite Element Analysis of Drawing Process for Nb3Sn Superconducting Strands**

Yigong Shi<sup>1</sup>, Bo Wu<sup>1</sup>, Ke Zhang<sup>1</sup>, Jianwei Liu<sup>1</sup>, Jianfeng Li<sup>1</sup>, Xianghong Liu<sup>1</sup>, Yong Feng<sup>1</sup>, Pingxiang Zhang<sup>2</sup>

<sup>1</sup>Western Superconducting Technologies Co., Ltd., China

<sup>2</sup>Northwest Institute for non-ferrous Metal Research, China

**2-MP-NB-S13****Enhanced Critical Current Densities of Nb3Sn Superconducting Strands in WST**

Jianwei Liu<sup>1</sup>, Yigong Shi<sup>1</sup>, Bo Wu<sup>1</sup>, Ke Zhang<sup>1</sup>, Jianfeng Li<sup>1</sup>, Xianghong Liu<sup>1</sup>, Yong Feng<sup>1</sup>, Pingxiang Zhang<sup>2</sup>

<sup>1</sup>Western Superconducting Technologies Co., Ltd., China

<sup>2</sup>Northwest Institute for non-ferrous Metal Research, China

**2-MP-NB-S14****Study on High Jc and Low AC Losses NbTi/Cu0.5Mn Superconducting Wire in WST**

Qiang Guo<sup>1</sup>, Rui long Wang<sup>1</sup>, Xing Qin<sup>1</sup>, Yanmin Zhu<sup>1</sup>, Kaijuan Yan<sup>1</sup>, Jianwei Liu<sup>1</sup>, Jianfeng Li<sup>1</sup>, Xianghong Liu<sup>1</sup>, Yong Feng<sup>1</sup>, Pingxiang Zhang<sup>1</sup>

<sup>1</sup>Western Superconducting Technologies Co., Ltd., China

**2-MP-NB-S15****The influence of processing methods and test methods on the n value of WIC wire**

Kaijuan Yan<sup>1</sup>, Qiang Guo<sup>1</sup>, Kailin Zhang<sup>1</sup>, Yanmin Zhu<sup>1</sup>, Rui long Wang<sup>1</sup>, Jianwei Liu<sup>1</sup>, Jianfeng Li<sup>1</sup>, Xianghong Liu<sup>1</sup>, Yong Feng<sup>1</sup>, Pingxiang Zhang<sup>1</sup>

<sup>1</sup>Western Superconducting Technologies Co., Ltd., China

**2-MP-NB-S16****Test results of WST high performance Nb3Sn strands**

Yongliang Zhang<sup>1</sup>, Chao Dai<sup>2</sup>, Yu Wu<sup>2</sup>, Kaihong Wu<sup>2</sup>

<sup>1</sup>Chinese Academy of Science, China

<sup>2</sup>Institute of Plasma Physics Chinese Academy of Science, China

**2-MP-NB-S17****Effect of applied strain on critical current of high-Jc Nb3Sn wire for FCC**

Iksang Shin<sup>1</sup>, Heonhwan Kim<sup>1</sup>, Sinhye Na<sup>1</sup>, Dukjae Yoon<sup>2</sup>, Eung-zu Kim<sup>2</sup>, Jiman Kim<sup>1</sup>

<sup>1</sup>Kiswire Advanced Technology Ltd., South Korea

<sup>2</sup>Metal Forming Technology R&D group, Korea Institute of Industrial Technology, South Korea

**2-MP-NB-S18****A Study on the Characteristics of Nb3Sn wires with Two Separate Stabilized Areas**

Sinhye Na<sup>1</sup>, Heonhwan Kim<sup>1</sup>, Iksang Shin<sup>1</sup>, Dukjae Yoon<sup>2</sup>, Eung-zu Kim<sup>2</sup>, Jiman Kim<sup>1</sup>

<sup>1</sup>Kiswire Advanced Technology Ltd., South Korea

<sup>2</sup>Metal Forming Technology R&D group, Korea Institute of Industrial Technology, South Korea

**2-MP-NB-S19****The Comparative Study of the Internal Tin Nb3Sn Wires with Different Layouts**

Pavel Lukyanov<sup>1</sup>, Maria Polikarpova<sup>1</sup>, Daria Novosilova<sup>2</sup>, Anastasia Tsapleva<sup>1</sup>, Maxim Alekseev<sup>1</sup>, Ildar Abdyukhanov<sup>1</sup>, Alexander Silaev<sup>1</sup>, Ksenia Bazaleeva<sup>1</sup>, Viktor Pantyrny<sup>1</sup>, Mikhail Potapenko<sup>1</sup>, Sergey Zernov<sup>3</sup>, Vladimir Sergeev<sup>4</sup>

<sup>1</sup>JSC VNIINM, Russia

<sup>2</sup>JSC VNIM, Russia

<sup>3</sup>TVEL Corporation, Russia

<sup>4</sup>NANOELECTRO LLC, Russia

**2-MP-NB-S20****Development of the matrix reinforced Nb3Sn wires using Cu-Sn-In alloy matrices**

Yoshimitsu Hishinuma<sup>1</sup>, Hiroyasu Taniguchi<sup>2</sup>, Akihiro Kikuchi<sup>3</sup>

<sup>1</sup>National Institute for Fusion Science, Japan

<sup>2</sup>Osaka Alloying Works Co.,Ltd, Japan

<sup>3</sup>National Institute for Materials Science, Japan



1530-1615 Refreshments &amp; Exhibition

HALLS 1 &amp; 2

## Oral Session 4

1615-1815

**1615-1815 2-EO-QT - Quantum Technologies [SPECIAL SESSION]**

ROOM: CLYDE AUDITORIUM

Chairs: Alexander Brinkman, University of Twente and Floriana Lombardi, Chalmers University of Technology

1615

**2-EO-QT-011****Magnetic field compatible circuit quantum electrodynamics**Maja Cassidy<sup>1</sup><sup>1</sup>Microsoft Quantum Sydney, Australia

1645

**2-EO-QT-021****Surface spins as a source 1/f charge noise in superconducting devices**Tobias Lindstrom<sup>1</sup>, Sebastian de Graaf<sup>1</sup>, Jonathan Burnett<sup>1</sup>, Alexander Ya. Tzalenchuk<sup>1</sup>, Sergey Kubatkin<sup>2</sup>, Andrey Danilov<sup>2</sup>, Lara Faoro<sup>3</sup><sup>1</sup>National Physical Laboratory, United Kingdom<sup>2</sup>Chalmers University of Technology, Sweden<sup>3</sup>CNRS UMR, France

1715

**2-EO-QT-035****Simulation of a dynamic quantum phase transition using a superconducting qubit**Xueyi Guo<sup>1</sup>, Chao Yang<sup>1</sup>, Yirong Jin<sup>1</sup>, Shu Chen<sup>1</sup>, Heng Fan<sup>1</sup>, Dongning Zheng<sup>1</sup><sup>1</sup>Beijing National Laboratory for Condensed Matter Physics, Institute of Physics, Chinese Academy of Sciences, China

1730

**2-EO-QT-045****Tavis-Cummings level splitting with intermediate-scale superconducting circuits**Martin Weides<sup>1</sup>, Ping Yang<sup>2</sup>, Jan Brehm<sup>2</sup>, Juha Leppäkangas<sup>2</sup>, Lingzhen Guo<sup>2</sup>, Michael Marthaler<sup>2</sup>, Isabella Boventer<sup>3</sup>, Alexander Stehli<sup>2</sup>, Tim Wolz<sup>2</sup>, Alexey Ustinov<sup>2</sup><sup>1</sup>University of Glasgow, United Kingdom<sup>2</sup>Karlsruhe Institute of Technology, Germany<sup>3</sup>University of Mainz, Germany

TUESDAY

1745

**2-EO-QT-05S****Tuning of dissipation in magnetic Josephson junctions towards quantum devices**

Davide Massarotti<sup>1</sup>, Roberta Caruso<sup>2</sup>, Halima Giovanna Ahmad<sup>3</sup>, Alessandro Miano<sup>3</sup>, Niladri Banerjee<sup>4</sup>, Avradeep Pal<sup>4</sup>, Gabriele Campagnano<sup>3</sup>, Procolo Lucignano<sup>3</sup>, Matthias Eschrig<sup>5</sup>, Giovanni Piero Pepe<sup>3</sup>, Mark Blamire<sup>4</sup>, Francesco Tafuri<sup>3</sup>

<sup>1</sup>Electrical Engineering and Information Technologies Department, University of Naples Federico II, CNR-SPIN UOS Napoli, Italy

<sup>2</sup>Physics Department "E. Pancini", University of Naples Federico II, CNR-SPIN UOS Napoli, SeeQC-eu, Italy

<sup>3</sup>Physics Department "E. Pancini", University of Naples Federico II, CNR-SPIN UOS Napoli, Italy

<sup>4</sup>Department of Materials Science and Metallurgy, University of Cambridge, United Kingdom

<sup>5</sup>Department of Physics, Royal Holloway, University of London, United Kingdom

1800

**2-EO-QT-06S****Superconducting nanobridge electronics for next generation quantum devices**

Jon Collins<sup>1</sup>, Connor D. Shelly<sup>1</sup>, Umberto Nasti<sup>1</sup>, Robert H Hadfield<sup>1</sup>, Jonathan M Williams<sup>1</sup>, Jane Ireland<sup>1</sup>, Alessandro Casaburi<sup>1</sup>

<sup>1</sup>University of Glasgow, United Kingdom

**1615-1815 2-MO-CP - Coated Conductors - Properties** ROOM: FORTH

Chairs: Alexander Usoskin, Bruker and Mayraluna Lao,  
Karlsruhe Institute of Technology

1615

**2-MO-CP-01I****Examining vortex creep via electrical transport measurement of coated conductors**

Mayraluna Lao<sup>1</sup>, Jens Hänsch<sup>1</sup>, Dirk Fuchs<sup>1</sup>, Bernhard Holzapfel<sup>1</sup>

<sup>1</sup>Karlsruhe Institute of Technology (KIT), Germany

1645

**2-MO-CP-02S****Analysis of angular dependent Jc of REBCO coated conductors with APCs**

Kaname Matsumoto<sup>1</sup>, Yutaka Yoshida<sup>2</sup>, Satoshi Awaji<sup>3</sup>, Yuji Tsuchiya<sup>2</sup>, Tomoya Horide<sup>1</sup>, Alok Jha<sup>1</sup>

<sup>1</sup>Kyushu Institute of Technology, Japan

<sup>2</sup>Nagoya University, Japan

<sup>3</sup>Tohoku University, Japan

1700

**2-MO-CP-03S****Pinning Properties of REBCO-CCs with Domain Control by High-T-Bending Annealing**

Tatsunori Okada<sup>1</sup>, Hidenori Misaizu<sup>1</sup>, Satoshi Awaji<sup>1</sup>

<sup>1</sup>Institute for Materials Research, Tohoku University, Japan

1715

**2-MO-CP-04S****Hot spot creation in coated conductors used for fault current limitation**

Fedor Gömöry<sup>1</sup>, Ján Šouc<sup>1</sup>, Michal Vojenčiak<sup>1</sup>, Marek Mošař<sup>1</sup>, Marcela Pekarčíková<sup>2</sup>, Crisian Lacroix<sup>3</sup>, Frédéric Sirois<sup>3</sup>

<sup>1</sup>Institute of Electrical Engineering, Slovak Academy of Sciences, Slovakia

<sup>2</sup>Faculty of Materials and Technologies in Trnava, Slovak University of Technology in Bratislava, Slovakia

<sup>3</sup>Department of Electrical Engineering, Polytechnique Montréal, Canada

1730

**2-MO-CP-05S****In-field performance of long-length DD-YBCO coated conductors at 77 and 4.2 K**

Johannes Gnilsen<sup>1</sup>, Alexander Usoskin<sup>2</sup>, Michael Eisterer<sup>3</sup>, Ulrich Betz<sup>2</sup>, Klaus Schlenga<sup>2</sup>

<sup>1</sup>Bruker HTS GmbH, TU Wien, Germany

<sup>2</sup>Bruker HTS GmbH, Germany

<sup>3</sup>Atominstytut, TU Wien, Austria

1745

**2-MO-CP-06S****2G HTS wire with high Je at low temperature in high magnetic field**

Anton Markelov<sup>1</sup>, Valery Petrykin<sup>2</sup>, Sergey Lee<sup>2</sup>, Roman Valikov<sup>1</sup>, Vsevolod Chepikov<sup>1</sup>, Andrey Petrzhik<sup>1</sup>, Burkhan Massalimov<sup>1</sup>, Alexey Mankevich<sup>1</sup>, Pavel Degtyarenko<sup>1</sup>, Alexander Molodyk<sup>1</sup>, Sergey Samoilenkov<sup>1</sup>

<sup>1</sup>SuperOx, Russia

<sup>2</sup>SuperOx Japan LLC, Japan

1800

**2-MO-CP-07S****Dynamic resistance measurement in a YBCO wire at various operating temperatures**

Yanchao Liu<sup>1</sup>, Zhenan Jiang<sup>2</sup>, Gennady Sidrov<sup>2</sup>, Chris Bumby<sup>2</sup>, Rodney Badcock<sup>2</sup>, Jin Fang<sup>3</sup>

<sup>1</sup>Beijing Jiaotong University, Victoria University of Wellington, China

<sup>2</sup>Victoria University of Wellington, New Zealand

<sup>3</sup>Beijing Jiaotong University, China

1615-1815

**2-MO-AP - Broad Studies for Applications**

ROOM: GALA

Chairs: David Larbalestier, The National High Magnetic Field Laboratory and Mike Sumption, The Ohio State University, Materials Science Department

1615

**2-MO-AP-01I****Wide range studies of  $J_c(H,T,\text{angle})$  in Bi-2212 and REBCO coated conductors.**

David Larbalestier<sup>1</sup>

<sup>1</sup>National High Magnetic Field Laboratory, United States of America

1645	<b>2-MO-AP-021</b> <b>The Magnetization of HTS cables for Particle Accelerator Applications</b> <u>Mike Sumption</u> <sup>1</sup> <sup>1</sup> The Ohio State University, Materials Science Department, United States of America
1715	<b>2-MO-AP-03S</b> <b>Design, Performance and Cabling Analysis of Nb3Sn Wires for the FCC Study</b> <u>Simon C. Hopkins</u> <sup>1</sup> , Algirdas Baskys <sup>1</sup> , Bernardo Bordini <sup>1</sup> , Jerome Fleiter <sup>1</sup> , Amalia Ballarino <sup>1</sup> <sup>1</sup> CERN, Switzerland
1730	<b>2-MO-AP-04S</b> <b>Coated Conductor technology for the beam screen of CERN FCC-hh</b> <u>Joffre Gutierrez Royo</u> <sup>1</sup> , Artur Romanov <sup>1</sup> , Patrick Krkotic <sup>2</sup> , Joan O'Callaghan <sup>3</sup> , Danilo Andrea Zanin <sup>4</sup> , Holger Neupert <sup>4</sup> , Pedro Costa Pinto <sup>4</sup> , Pierre Demolon <sup>4</sup> , Angelo Rafael Granadeiro Costa <sup>4</sup> , Mauro Taborelli <sup>4</sup> , Francis Perez <sup>5</sup> , Montse Pont <sup>5</sup> , Sergio Calatroni <sup>4</sup> , Teresa Puig <sup>1</sup> <sup>1</sup> Institut de Ciència de Materials de Barcelona (ICMAB-CSIC), Spain <sup>2</sup> ALBA Synchrotron - CELLS, Universitat Politècnica de Catalunya - CommSensLab, Spain <sup>3</sup> Universitat Politècnica de Catalunya - CommSensLab, Spain <sup>4</sup> CERN, Switzerland <sup>5</sup> ALBA Synchrotron - CELLS, Spain
1745	<b>2-MO-AP-05S</b> <b>Development of REBCO tapes on dielectric flexible substrates for RF applications</b> <u>Yuan Zhang</u> <sup>1</sup> , Martha Suarez-Villagrán <sup>2</sup> , Sicong Sun <sup>1</sup> , Rudra Pratap <sup>1</sup> , Eduard Galstyan <sup>1</sup> , Jarek Wosik <sup>3</sup> , Venkat Selvamanickam <sup>1</sup> <sup>1</sup> Department of Mechanical Engineering, University of Houston, Texas Center for Superconductivity, University of Houston, Advanced Manufacturing Institute, University of Houston, United States of America <sup>2</sup> Texas Center for Superconductivity, University of Houston, United States of America <sup>3</sup> Electrical and Computer Engineering Department, University of Houston, Texas Center for Superconductivity at University of Houston, United States of America
1800	<b>2-MO-AP-06S</b> <b>Durham's Contribution to ITER's TF and PF Strand Verification Process</b> <u>Mark Raine</u> <sup>1</sup> , Thierry Boutboul <sup>2</sup> , Peter Readman <sup>2</sup> , Damian Hampshire <sup>1</sup> <sup>1</sup> European Fusion Energy Reference Laboratory - Metrology of Superconducting Strands. Superconductivity group, Centre for Materials Physics, Department of Physics, Durham University, United Kingdom <sup>2</sup> ITER Delivery Department, Fusion for Energy, France

1615-1815 **2-LO-EA - Electric Aircraft [SPECIAL SESSION]**

ROOM: CARRON

Chairs: Tabea Arndt, Siemens and Mark Ainslie, University of Cambridge



1615

**2-LO-EA-011****Holistic system approach for electric aircraft using superconducting components**

Martin Boll<sup>1</sup>, Matthias Corduan<sup>2</sup>, Stefan Biser<sup>3</sup>, Phillip Weber<sup>4</sup>, Lars Kuehn<sup>1</sup>, Mykhaylo Filipenko<sup>1</sup>, Sonja Schlachter<sup>5</sup>, Bernhard Holzapfel<sup>5</sup>, Frederick Timothy Neil Berg<sup>6</sup>, Peter Rostek<sup>7</sup>

<sup>1</sup>Siemens AG, Corporate Technology- eAircraft, Germany

<sup>2</sup>Siemens AG, Corporate Technology- eAircraft, Karlsruhe Institute of Technology, Institute of Technical Physics, Germany

<sup>3</sup>Karlsruhe Institute of Technology- Institute of Technical Physics, Siemens AG, Corporate Technology- eAircraft, Germany

<sup>4</sup>Siemens AG, Corporate Technology- eAircraft, Institute of Avionics, University of Stuttgart, Germany

<sup>5</sup>Karlsruhe Institute of Technology, Institute of Technical Physics, Germany

<sup>6</sup>Airbus Central R&T, Germany

<sup>7</sup>Airbus Electric Aircraft Systems, Germany

1645

**2-LO-EA-025****fully superconductive propulsion motor with 1MW for airborne application**

Thomas Reis<sup>1</sup>, Johannes Oswald<sup>1</sup>, Bernhard Oswald<sup>1</sup>, A.T.A.M. deWaele<sup>1</sup>, Eva Berberich<sup>1</sup>, Simon Wolfstädter<sup>1</sup>, Christian Schneider<sup>1</sup>

<sup>1</sup>Oswald Elektromotoren GmbH, Germany

1700

**2-LO-EA-035****Design consideration of fully HTS machines for future electric aircraft**

Min Zhang<sup>1</sup>, Fangjing Wen<sup>2</sup>, Sriharsha Venuturumilli<sup>2</sup>, Weijia Yuan<sup>2</sup>

<sup>1</sup>University of Strathclyde, Shanghai Jiao tong University,

<sup>2</sup>University of Strathclyde, United Kingdom

1715

**2-LO-EA-045****High Power Density 10 MW HTS-Generator for eAircraft**

Lars Kuehn<sup>1</sup>, Joern Grundmann<sup>1</sup>, Marc Lessmann<sup>1</sup>, Thomas Gleixner<sup>1</sup>, Matthias Boehm<sup>1</sup>, Stefan Moldenhauer<sup>1</sup>, Dirk Moeller<sup>1</sup>, Kerstin Haese<sup>1</sup>, Mykhaylo Filipenko<sup>1</sup>

<sup>1</sup>Siemens AG, Germany

1730

**2-LO-EA-055****Construction and Test of a Flux Modulation Superconducting Machine for Aircraft**

Alexandre Colle<sup>1</sup>, Jean Leveque<sup>2</sup>, Thierry Lubin<sup>2</sup>, Sabrina Ayat<sup>3</sup>, Olivier Gosselin<sup>3</sup>

<sup>1</sup>Safran Tech and GREEN, University of Lorraine, France

<sup>2</sup>GREEN, University de Lorraine, France

<sup>3</sup>Safran Tech, France

1745

**2-LO-EA-065****AC loss in the distributed stator winding of a 1 MW motor for aviation**

Enric Pardo<sup>1</sup>, Jan Kovac<sup>1</sup>, Michal Vojenciak<sup>1</sup>, Shuo Li<sup>2</sup>, Francesco Grilli<sup>3</sup>, Yingzhen Liu<sup>3</sup>, Tara Benkel<sup>3</sup>, Simon Wolftaedler<sup>4</sup>, Eva Berberich<sup>4</sup>, Thomas Reis<sup>4</sup>

<sup>1</sup>Institute of Electrical Engineering, Slovak Academy of Sciences, Slovakia

<sup>2</sup>Institute of Electrical Engineering, Slovak Academy of Sciences, College of Information Science and Engineering, Northeastern University, Shenyang, Slovakia

<sup>3</sup>Karlsruhe Institute of Technology (KIT), Germany

<sup>4</sup>Oswald Elektromotoren GmbH, Germany

1800	<b>2-LO-EA-07S</b> <b>Developing HTS electric propulsion machines using no-insulation (NI) coils</b> <u>Yawei Wang</u> <sup>1</sup> , Fangjing Weng <sup>1</sup> , Min Zhang <sup>1</sup> , Weijia Yuan <sup>1</sup> <sup>1</sup> University of Strathclyde, United Kingdom
1615-1815	<b>2-LO-FH - Fusion (HTS)</b>
	<b>ROOM: DOCHART</b>
	Chairs: Pierluigi Bruzzone, EPFL Lausanne and Ortensia Dicouzon, EPFL-SPC
1615	<b>2-LO-FH-01I</b> <b>Development of FAIR conductor and HTS coil for fusion experimental device</b> <u>Toshiyuki Mito</u> <sup>1</sup> , Yuta Onodera <sup>1</sup> , Kazuya Takahata <sup>1</sup> , Nagato Yanagi <sup>1</sup> , Noriko Chikumoto <sup>2</sup> , Akifumi Kawagoe <sup>3</sup> , Shinji Hamaguchi <sup>1</sup> , Suguru Takada <sup>1</sup> , Akifumi Iwamoto <sup>1</sup> , Tomosumi Baba <sup>1</sup> <sup>1</sup> National Institute for Fusion Science (NIFS), Japan <sup>2</sup> Chubu University, Japan <sup>3</sup> Kagoshima University, Japan
1645	<b>2-LO-FH-02S</b> <b>Development of 20 T conduction cooled non-insulated REBCO magnet technology</b> <u>Robert Slade</u> <sup>1</sup> , Greg Brittles <sup>1</sup> , Rod Bateman <sup>1</sup> , Bas van Nugteren <sup>1</sup> , Marcel Kruip <sup>1</sup> , Tony Langtry <sup>1</sup> , John Teah <sup>1</sup> <sup>1</sup> Tokamak Energy, United Kingdom
1700	<b>2-LO-FH-03S</b> <b>Development of HTS CORC® Cables and Joints for use in Magnets for Fusion</b> <u>Jeremy Weiss</u> <sup>1</sup> , Danko van der Laan <sup>1</sup> , Tim Mulder <sup>2</sup> , Herman ten Kate <sup>2</sup> <sup>1</sup> Advanced Conductor Technologies, University of Colorado, United States of America <sup>2</sup> CERN, University of Twente, Switzerland
1715	<b>2-LO-FH-04S</b> <b>Quench Study of REBCO Cable-In-Conduit Conductors</b> <u>Rui Kang</u> <sup>1</sup> , Davide Uglietti <sup>2</sup> , Kamil Sedlak <sup>2</sup> , Rainer Wesche <sup>2</sup> , Pierluigi Bruzzone <sup>2</sup> , Boris Stepanov <sup>2</sup> , Yuntao Song <sup>3</sup> <sup>1</sup> University of Science and Technology of China, Department of Engineering and Applied Physics, China <sup>2</sup> École Polytechnique Fédérale de Lausanne (EPFL), Swiss Plasma Center (SPC), Switzerland <sup>3</sup> Institute of Plasma Physics, Chinese Academy of Sciences, China
1730	<b>2-LO-FH-05S</b> <b>Recent progress in development of HTS CICC for CFETR magnet</b> <u>Jinggang Qin</u> <sup>1</sup> , Chao Zhou <sup>1</sup> , <u>Jin Huan</u> et al <sup>1</sup> <sup>1</sup> Institute of Plasma Physics Chinese Academy of Sciences, China
1745	<b>2-LO-FH-06S</b> <b>Transposition in superconducting cables: which differences between LTS and HTS?</b> <u>Davide Uglietti</u> <sup>1</sup> <sup>1</sup> École Polytechnique Fédérale de Lausanne (EPFL), Swiss Plasma Center (SPC), Switzerland

1800

**2-LO-FH-07S****D shaped REBCO model coil for fusion by in-suit winding technology**Xinsheng Yang<sup>1</sup><sup>1</sup>Southwest Jiaotong University, China**1615-1815 2-EO-DA - Detector Applications**

ROOM: M2 &amp; M3

Chairs: Jukka Pekola, Aalto University and Francesca Chiodi, Université Paris Saclay/C2N

1615

**2-EO-DA-01I****Transition-Edge Sensor Development at NIST**Joel Ullom<sup>1</sup><sup>1</sup>NIST and the University of Colorado, United States of America

1645

**2-EO-DA-02S****Practical Superconducting Single-Photon Detector with Micron-Wide Strip**Alexander Korneev<sup>1</sup>, Yuliya Korneeva<sup>2</sup>, Nadejda Manova<sup>2</sup>, Eugeny Smirnov<sup>2</sup>, Irina Florya<sup>2</sup>, Margarita Polyakova<sup>3</sup>, Mikhail Mikhailov<sup>4</sup>, Denis Vodolazov<sup>5</sup>, Gregory Gotsman<sup>1</sup><sup>1</sup>Moscow State Pedagogical University, National Research University Higher School of Economics, Russia<sup>2</sup>Moscow State Pedagogical University, Russia<sup>3</sup>National Research University Higher School of Economics, Moscow State Pedagogical University, Russia<sup>4</sup>B. Verkin Institute for Low Temperature Physics and Engineering of the National Academy of Sciences of Ukraine, Ukraine<sup>5</sup>Institute for Physics of Microstructures, Russian Academy of Sciences, Russia

1700

**2-EO-DA-03S****Neutron imaging by using current-biased Nb nanowire detector with 10B converter**Takekazu Ishida<sup>1</sup>, The Dang Vu<sup>2</sup>, Hiroaki Shishido<sup>3</sup>, Kazuma Nishimura<sup>4</sup>, Yuki Iizawa<sup>4</sup>, Kenji M Kojima<sup>5</sup>, Kenichi Oikawa<sup>2</sup>, Masahide Harada<sup>2</sup>, Shigeyuki Miyajima<sup>6</sup>, Mutsuo Hidaka<sup>7</sup>, Takayuki Oku<sup>2</sup>, Kazuhiko Soyama<sup>2</sup>, Kazuya Aizawa<sup>2</sup>, Tomio Koyama<sup>8</sup><sup>1</sup>Division of Quantum and Radiation Engineering, Osaka Prefecture University, Sakai, NanoSquare Research Institute, Osaka Prefecture University, Japan<sup>2</sup>Materials and Life Science Division, J-PARC Center, Japan Atomic Energy Agency, Japan<sup>3</sup>Department of Physics and Electronics, Osaka Prefecture University, NanoSquare Research Institute, Osaka Prefecture University, Japan<sup>4</sup>Department of Physics and Electronics, Osaka Prefecture University, Japan<sup>5</sup>Centre for Molecular and Materials Science, TRIUMF and Stewart Blusson Quantum Matter Institute, University of British Columbia, Canada<sup>6</sup>Advanced ICT Research Institute, National Institute of Information and Communications Technology, Japan<sup>7</sup>National Institute of Advanced Industrial Science and Technology, Japan<sup>8</sup>Division of Quantum and Radiation Engineering, Osaka Prefecture University, Japan

TUESDAY

1715

**2-EO-DA-04S****TES microcalorimeter detectors suitable for neutrino mass measurement**

Andrea Giachero<sup>1</sup>, Daniel T Becker<sup>2</sup>, Douglas A. Bennett<sup>2</sup>, Matteo Borghesi<sup>1</sup>, Michele Biasotti<sup>3</sup>, Matteo De Gerone<sup>4</sup>, Marco Faverzani<sup>1</sup>, Joseph W. Fowler<sup>2</sup>, Giovanni Gallucci<sup>4</sup>, Johnathon D. Gard<sup>2</sup>, Gene C. Hilton<sup>2</sup>, John A. B. Mates<sup>2</sup>, Angelo Nucciotti<sup>1</sup>, Gianluigi Pessina<sup>5</sup>, Andrei P. Puiu<sup>1</sup>, Carl D. Reintsema<sup>2</sup>, Daniel R. Schmidt<sup>2</sup>, Daniel S. Swetz<sup>2</sup>, Joel N. Ullom<sup>2</sup>, Leila R. Vale<sup>2</sup>

<sup>1</sup>University of Milano - Bicocca, INFN of Milano - Bicocca, Italy

<sup>2</sup>National Institute of Standards and Technology, United States of America

<sup>3</sup>Dipartimento di Fisica, Università di GenovaINFN - Sezione di Genova, Italy

<sup>4</sup>INFN - Sezione di Genova, Italy

<sup>5</sup>INFN of Milano-Bicocca, Italy

1730

**2-EO-DA-05S****Nanosecond thermometry with Josephson junction**

Maciej Zgirski<sup>1</sup>, Marek Foltyń<sup>1</sup>, Alexander Savin<sup>2</sup>, Konrad Norowski<sup>1</sup>, Andrii Naumov<sup>1</sup>

<sup>1</sup>Institute of Physics, Polish Academy of Sciences, Poland

<sup>2</sup>Low Temperature Laboratory, Department of Applied Physics, Aalto University School of Science, Poland

1745

**2-EO-DA-06S****Hafnium MEGA array detector**

Alexey Merenkov<sup>1</sup>, Vladimir Chichkov<sup>1</sup>, Andrey Ermakov<sup>2</sup>, Alexey Ustinov<sup>3</sup>, Sergey Shitov<sup>4</sup>

<sup>1</sup>National University of Science and Technology MISIS, Russia

<sup>2</sup>Kotel'nikov Institute of Radio Engineering and Electronics, Russia

<sup>3</sup>Physikalisches Institut, Karlsruhe Institute of Technology (KIT), Germany and National University of Science and Technology MISIS, Germany

<sup>4</sup>National University of Science and Technology MISIS, Kotel'nikov Institute of Radio Engineering and Electronics, Russia

1800

**2-EO-DA-07S****The original seeds of superconducting phase transition during detection in SNSPD**

Labao Zhang<sup>1</sup>, Qi Chen<sup>1</sup>, Biao Zhang<sup>1</sup>, Xiaoqing Jiao<sup>1</sup>, Qingyuan Zhao<sup>1</sup>, Lin Kang<sup>1</sup>, Jian Chen<sup>1</sup>, Peiheng Wu<sup>1</sup>

<sup>1</sup>Nanjing University, China

1830-2000 **Evening Lecture - James Watt and Precision Engineering**

CLYDE AUDITORIUM

Prof John Marsh, School of Engineering, University of Glasgow

WEDNESDAY 4 SEPTEMBER



EUCAS 2019  
GLASGOW

# WEDNESDAY 4 SEPTEMBER

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0845-0900	<b>The Jan Evetts SUST Award</b>	CLYDE AUDITORIUM
0900-1000	<b>3-MO-PL2 Plenary</b> Chairs: John Durrell, University of Cambridge and Susannah Speller, University of Oxford	CLYDE AUDITORIUM
	<b>Superconductors in High Magnetic Fields – Now and the future</b> <u>Satoshi Awaji</u> Institute for Materials Research, Tohoku University, Japan	
1000-1045	<b>Refreshments &amp; Exhibition</b>	HALLS 1 & 2
1045-1245	<b>Oral Session 5</b>	
1245-1400	<b>Lunch</b>	HALLS 1 & 2
1400-1600	<b>Poster Session 3</b>	HALL 2
1530-1615	<b>Refreshments &amp; Exhibition</b>	HALLS 1 & 2
1615-1815	<b>Oral Session 6</b>	
1930-2000	<b>Coaches depart for Merchant Square</b>	
2000-0100	<b>Conference Dinner &amp; Ceilidh at Merchant Square</b>	
2300-0100	<b>Shuttle coaches depart for SEC</b>	

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# WEDNESDAY 4 SEPTEMBER

0845-0900 <b>The Jan Evetts SUST Award</b>	CLYDE AUDITORIUM
0900-1000 <b>3-MO-PL2 Plenary</b> Chairs: John Durrell, University of Cambridge and Susannah Speller, University of Oxford	CLYDE AUDITORIUM

## Superconductors in High Magnetic Fields – Now and the future

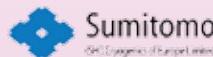
Satoshi Awaji

Institute for Materials Research, Tohoku University, Japan



Satoshi Awaji received a MSc in physics from Hiroshima University in 1990 before becoming a research associate at Tohoku University. He received an Engineering Doctorate from Tohoku University in 1998. Since 2016, he has been a professor at High Field Laboratory for Superconducting Materials (HFLSM), Institute for Materials Research, Tohoku University. He is an experimental scientist on superconducting materials research and high field magnet with experiences in the physics of superconducting materials and also in technology of high field superconducting magnets. His specialty areas of expertise are critical currents of practical superconducting wires/tapes and (cryogen-free) superconducting magnets with high temperature superconductors and Nb<sub>3</sub>Sn. He is mostly involved in the understanding the flux pinning mechanism of practical superconducting materials and in the developing the high field cryogen-free superconducting magnets, as well as managing the user program of the HFLSM. He has published more than 541 ISI journal papers.

This plenary is sponsored by Sumitomo



1000-1045 <b>Refreshments &amp; Exhibition</b>	HALLS 1 & 2
<b>Oral Session 5</b>	
1045-1245 <b>3-LO-HH - High Field HTS</b>	ROOM: CLYDE AUDITORIUM

Chairs: Davide Ugliesti, Ecole Polytechnique Fédérale de Lausanne (EPFL), Swiss Plasma Center (SPC) and Quiliang Wang, Chinese Academy of Sciences (IEECAS)

1045

**3-LO-HH-011****Progress on No-Insulation HTS Magnet Technology**

Seung Yong Hahn<sup>1</sup>, Iain Dixon<sup>2</sup>, Thomas Painter<sup>2</sup>, Kwanglok Kim<sup>2</sup>, Kwangmin Kim<sup>2</sup>, Xinbo Hu<sup>2</sup>, Kabintra Bhattachari<sup>2</sup>, So Noguchi<sup>3</sup>, Seokho Kim<sup>4</sup>, Jeseok Bang<sup>5</sup>, Uijong Bong<sup>5</sup>, Subin An<sup>5</sup>, David Larbalestier<sup>2</sup>

<sup>1</sup>Seoul National University, National High Magnetic Field Laboratory, Korea, South

<sup>2</sup>National High Magnetic Field Laboratory, United States of America

<sup>3</sup>Hokkaido University, National High Magnetic Field Laboratory, Japan

<sup>4</sup>Changwon National University, National High Magnetic Field Laboratory, Korea, South

<sup>5</sup>Seoul National University, Korea, South

1115

**3-LO-HH-02S****A 10 T HTS Insert made of MI Pancakes Tested in a Magnetic Field up to 20 T**

Xavier CHAUD<sup>1</sup>, Jung-Bin Song<sup>1</sup>, François Debray<sup>1</sup>, Thibault Lecrevisse<sup>2</sup>, Philippe Fazilleau<sup>2</sup>

<sup>1</sup>LNCMI-EMFL-CNRS, UGA, INSA, UPS, France

<sup>2</sup>IRFU, CEA, Université Paris-Saclay, France

1130

**3-LO-HH-03S****Design and performance evaluation of a 25 T all superconducting magnet**

Xintao Zhang<sup>1</sup>, Yi Shi<sup>2</sup>, Huajun Liu<sup>2</sup>, Fang Liu<sup>2</sup>, Yunfei Tan<sup>3</sup>, Hongjun Ma<sup>2</sup>, Chao Tian<sup>2</sup>, Lei Lei<sup>2</sup>

<sup>1</sup>Institute of Plasma Physics Chinese Academy of Sciences, University of Science and Technology of China, China

<sup>2</sup>Institute of Plasma Physics Chinese Academy of Sciences, China

<sup>3</sup>Wuhan National High Magnetic Field Center, Huazhong University Science and Technology, China

1145

**3-LO-HH-04S****High Field Flux Pumped Magnets**

Tim Coombs<sup>1</sup>, Yavuz Ozturk<sup>1</sup>, Boyang Shen<sup>1</sup>, Tom Painter<sup>2</sup>

<sup>1</sup>University of Cambridge, United Kingdom

<sup>2</sup>NHMFL, United States of America

1200

**3-LO-HH-05S****Bi-2212 Coil R&D for High Field Magnets**

Ulf Trociewitz<sup>1</sup>, Ernesto Bosque<sup>1</sup>, Youngjae Kim<sup>1</sup>, Daniel Davis<sup>1</sup>, Charles English<sup>1</sup>, Jianyi Jiang<sup>1</sup>, Eric Hellstrom<sup>1</sup>, Imam Hossain<sup>1</sup>, Shaon Barua<sup>1</sup>, Yavuz Oz<sup>1</sup>, George Miller<sup>1</sup>, Jun Lu<sup>2</sup>, Jeremy Levitan<sup>2</sup>, David Larbalestier<sup>1</sup>

<sup>1</sup>Applied Superconductivity Center, National High Magnetic Field Laboratory, Florida State University, United States of America

<sup>2</sup>MST/NHMFL, United States of America

1215

**3-LO-HH-06S****Electrical and thermal behaviours of INS and NI HTS-wound pancake coils at 77 K**

Roland Gyuráki<sup>1</sup>, Fabian Schreiner<sup>1</sup>, Tara Benkel<sup>1</sup>, Frédéric Sirois<sup>2</sup>, Francesco Grilli<sup>1</sup>

<sup>1</sup>Karlsruhe Institute of Technology (KIT), Germany

<sup>2</sup>Polytechnique Montreal, Canada

1230

**3-LO-HH-07S****A REBCO superconducting switch for reducing temporal fluctuations in driven-mode**Sadanori Iwai<sup>1</sup>, Yasumi Otani<sup>1</sup>, Hiroshi Miyazaki<sup>1</sup>, Shunji Nomura<sup>1</sup>, Toshinobu Ito<sup>1</sup><sup>1</sup>Toshiba Energy Systems & Solutions Corporation, Japan**1045-1245 3-MO-FP4 - Critical Current and Flux Pinning 4**

ROOM: FORTH

Chairs: Jens Hänisch, Karlsruhe Institute of Technology  
and Michael Eisterer, TU Wien

1045

**3-MO-FP4-01I****Neutron irradiation: introduced defects and effects on various superconductors**Michael Eisterer<sup>1</sup>, David X. Fischer<sup>1</sup>, Daniel Kagerbauer<sup>1</sup>, Raphael Unterrainer<sup>1</sup>, Thomas Baumgartner<sup>1</sup>, Stephan Pfeiffer<sup>2</sup>, Johannes Bernardi<sup>2</sup><sup>1</sup>Atominstitut, TU Wien, Austria<sup>2</sup>USTEM, TU Wien, Austria

1115

**3-MO-FP4-02S****Critical current anisotropy in Fe(Se,Te) films irradiated by high-energy protons**Gaia Grimaldi<sup>1</sup>, Antonio Leo<sup>2</sup>, Angela Nigro<sup>2</sup>, Gianluca Ghigo<sup>3</sup>, Laura Gozzelino<sup>3</sup>, Daniele Torsello<sup>3</sup>, Valeria Braccini<sup>1</sup>, Giulia Sylva<sup>4</sup>, Carlo Ferdeghini<sup>1</sup>, Marina Putti<sup>4</sup><sup>1</sup>CNR - SPIN, Italy<sup>2</sup>Physics Department, University of Salerno, Jamaica<sup>3</sup>Department of Applied Science and Technology, Politecnico di Torino and INFN Sezione di Torino, Italy<sup>4</sup>Physics Department, University of Genova, Japan

1130

**3-MO-FP4-03S****Power law correlation between Tc and Jc in neutron irradiated Ba-122 crystals**Daniel Kagerbauer<sup>1</sup>, Shigeyuki Ishida<sup>2</sup>, Ventsislav Mishev<sup>1</sup>, Dongjoon Song<sup>2</sup>, Hiraku Ogino<sup>2</sup>, Hiroshi Eisaki<sup>2</sup>, Masamichi Nakajima<sup>3</sup>, Akira Iyo<sup>2</sup>, Michael Eisterer<sup>1</sup><sup>1</sup>Atominstitut, TU Wien, Austria<sup>2</sup>Electronics and Photonics Research Institute, National Institute of Advanced Industrial Science and Technology (AIST), Japan<sup>3</sup>Department of Physics, Osaka University, Japan

1145

**3-MO-FP4-04S**

**Intrinsic anisotropy in nanostructured  $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$  from microwave measurements**

Enrico Silva<sup>1</sup>, Andrea Alimenti<sup>1</sup>, Kostiantyn Torokhtii<sup>1</sup>, Benedetta Belli<sup>2</sup>, Anna Palau<sup>3</sup>, Teresa Puig<sup>4</sup>, Elena Bartolomé<sup>5</sup>, Nicola Pompeo<sup>1</sup>

<sup>1</sup>Dipartimento di Ingegneria, Università Roma Tre, Italy

<sup>2</sup>Università Roma Tre, Italy

<sup>3</sup>Institut de Ciència de Materials de Barcelona-CSIC, Bellaterra, Spain, Spain

<sup>4</sup>ICMB-CSIC, Spain

<sup>5</sup>Escola Universitaria Salesiana de Sarrià (EUSST), Spain

1200

**3-MO-FP4-05S**

**Resistivity of HTS tapes in overcritical current regime: impact on SFCL modeling**

Nicolo Riva<sup>1</sup>, Francesco Grilli<sup>2</sup>, Frédéric Sirois<sup>3</sup>, Simon Richard<sup>3</sup>, Christian Lacroix<sup>3</sup>, Bertrand Dutoit<sup>1</sup>

<sup>1</sup>Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland

<sup>2</sup>Karlsruhe Institute of Technology IITEP (KIT), Germany

<sup>3</sup>Polytechnique Montréal (PM), Canada

1215

**3-MO-FP4-06S**

**Growth of CSD low fluorine YBCO superconducting layers on sapphire substrates**

Cornelia Pop<sup>1</sup>, Pedro Barusco<sup>1</sup>, Amir Saraf<sup>2</sup>, Valentina Roxana Vlad<sup>3</sup>, Susagna Ricart<sup>1</sup>, Guy Deutscher<sup>2</sup>, Xavier Granados<sup>1</sup>, Albert Calleja<sup>3</sup>, Teresa Puig<sup>1</sup>, Xavier Obradors<sup>1</sup>

<sup>1</sup>Institut de Ciència de Materials de Barcelona (ICMAB-CSIC), Spain

<sup>2</sup>Tel Aviv University, Israel

<sup>3</sup>Oxolutia SL, Spain

1045-1245

**3-MO-BM - BiSCCO-based Materials and MgB2**

ROOM: GALA

Chairs: Tetiana Prikhna, Institute for Superhard Materials of the National Academy of Sciences of Ukraine and Akiyasu Yamamoto, Tokyo University of Agriculture and Technology

1045

**3-MO-BM-01S**

**Absence of Weak-Link Signature in Severely Underdoped Bi-2212 Round Wires**

Yavuz Oz<sup>1</sup>, Jianyi Jiang<sup>1</sup>, Maxime Matras<sup>2</sup>, Abiola Oloye<sup>1</sup>, Fumitake Kametani<sup>1</sup>, Eric Hellstrom<sup>1</sup>, David C. Larbalestier<sup>1</sup>

<sup>1</sup>Applied Superconductivity Center, National High Magnetic Field Laboratory, Florida State University, United States of America

<sup>2</sup>CERN, Switzerland

1100

**3-MO-BM-02S****Effects of precursor powder on the performance of Bi-2212 round wires**

Jianyi Jiang<sup>1</sup>, Andre Juliao<sup>1</sup>, S. Imam Hossain<sup>1</sup>, Yavuz Oz<sup>1</sup>, Michael D. Brown<sup>1</sup>, Daniel S. Davis<sup>1</sup>, Abiola Oloye<sup>1</sup>, Jonathan Cooper<sup>1</sup>, Evan Miller<sup>1</sup>, Fumitake Kametani<sup>1</sup>, Ulf P. Trociewitz<sup>1</sup>, Eric E. Hellstrom<sup>1</sup>, David C. Larbalestier<sup>1</sup>

<sup>1</sup>National High Magnetic Field Laboratory, Florida State University, United States of America

1115

**3-MO-BM-03S****Could we do without the OP process? Bi-2212 wire development at CNR-SPIN**

Alessandro Leveratto<sup>1</sup>, Giuseppe Celentano<sup>2</sup>, Sandro Chiarelli<sup>2</sup>, Andrea Traverso<sup>3</sup>, Marina Putti<sup>3</sup>, Amalia Ballarino<sup>4</sup>, Simon Hopkins<sup>4</sup>, Andrea Malagoli<sup>1</sup>

<sup>1</sup>CNR - SPIN, Italy

<sup>2</sup>ENEA Frascati Research Centre, Italy

<sup>3</sup>University of Genova, Italy

<sup>4</sup>CERN, Switzerland

1130

**3-MO-BM-04S****Strategies for Improving Ic of Superconducting Joint Connecting Bi2223 Tapes**

Jun-ichi Shimoyama<sup>1</sup>, Yasuaki Takeda<sup>2</sup>, Takanori Motoki<sup>1</sup>

<sup>1</sup>Aoyama Gakuin University, Japan

<sup>2</sup>University of Tokyo, Japan

1145

**3-MO-BM-05S****Development of MgB2 superconductor wire and coils for AC and DC applications**

Mike Tomsic<sup>1</sup>, Matt Rindfleisch<sup>1</sup>, Xuan Peng<sup>1</sup>, Dave Doll<sup>1</sup>, Mike Sumption<sup>2</sup>, Edward Collings<sup>2</sup>

<sup>1</sup>Hyper Tech Research Inc., United States of America

<sup>2</sup>The Ohio State University, United States of America

1200

**3-MO-BM-06S****Development of high-Jc MgB2 wires fabricated from mechanically milled powder**

Motomune Kodama<sup>1</sup>, Hiroshi Kotaki<sup>1</sup>, Takaaki Suzuki<sup>1</sup>, Hideki Tanaka<sup>2</sup>, Ryuya Ando<sup>1</sup>, Takeshi Nakayama<sup>1</sup>, Gen Nishijima<sup>3</sup>, Akiyoshi Matsumoto<sup>3</sup>, Akiyasu Yamamoto<sup>4</sup>, Jun-ichi Shimoyama<sup>5</sup>

<sup>1</sup>Research & Development Group, Hitachi Ltd., Japan

<sup>2</sup>Research & Development Group, Hitachi Ltd, Japan

<sup>3</sup>High-Temperature Superconducting Wire Group, National Institute for Materials Science, Japan

<sup>4</sup>Department of Applied Physics, Tokyo University of Agriculture and Technology, Japan

<sup>5</sup>Department of Physics and Mathematics, Aoyama Gakuin University, Japan

1215

**3-MO-BM-07S**

**Reverse AIMI to produce dense MgB<sub>2</sub> bulks and high J<sub>c</sub> wires through HIP treatment**

Gianmarco Bovone<sup>1</sup>, Marco Capra<sup>1</sup>, Cristina Bernini<sup>1</sup>, Federico Loria<sup>1</sup>, Tomasz Cetner<sup>2</sup>, Daniel Gajda<sup>3</sup>, Andrzej Morawski<sup>4</sup>, Amalia Ballarino<sup>5</sup>, Simon Hopkins<sup>5</sup>, Marina Putti<sup>6</sup>, Carlo Ferdegiani<sup>1</sup>, Maurizio Vignolo<sup>1</sup>

<sup>1</sup>SPIN Institute, Italy

<sup>2</sup>Unipress - Institute of High Pressure Physics PAS, Poland

<sup>3</sup>International Laboratory High Magnetic Fields and Low Temperature, Poland

<sup>4</sup>Unipress - Institute of High Pressure Physics, Poland

<sup>5</sup>CERN, Switzerland

<sup>6</sup>Physics Dipartiment - University of Genova, Italy

1230

**3-MO-BM-08S**

**Occurrence of Flux Jumps in MgB<sub>2</sub> Bulk Magnets during Pulse-Field Magnetization**

Naomichi Sakai<sup>1</sup>, Tetsuo Oka<sup>1</sup>, Kengo Yamanaka<sup>1</sup>, Longji Dadiel<sup>1</sup>, Hayami Oki<sup>2</sup>, Jun Ogawa<sup>2</sup>, Satoshi Fukui<sup>2</sup>, Juliane Scheiter<sup>3</sup>, Wolfgang Häßler<sup>3</sup>, Kazuya Yokoyama<sup>4</sup>, Jacques Noudem<sup>5</sup>, Muralidhar Miryala<sup>1</sup>, Masato Murakami<sup>1</sup>

<sup>1</sup>Shibaura Institute of Technology, Japan

<sup>2</sup>Niigata University, Japan

<sup>3</sup>IFW Dresden, Germany

<sup>4</sup>Ashikaga University, Japan

<sup>5</sup>Normandie University, France

**1045-1245 3-EO-SNQ - SQUIDs and NanoSQUIDs**

ROOM: CARRON

Chairs: Hans Hilgenkamp, University of Twente and Cathy Foley, CSIRO

1045

**3-EO-SNQ-01I**

**NanoSQUID-on-tip thermal imaging: glimpse into dissipation in quantum systems**

Eli Zeldov<sup>1</sup>

<sup>1</sup>Weizmann Institute of Science, Israel

1115

**3-EO-SNQ-02S**

**Tuning superconducting-resonator-frequency with SQUIDs and global fields**

Oscar Kennedy<sup>1</sup>, Christoph W Zollitsch<sup>1</sup>, James O'Sullivan<sup>1</sup>, Gavin Dold<sup>1</sup>, Jonathan Burnett<sup>2</sup>, Paul Warburton<sup>1</sup>, Eva Dupont-Ferrier<sup>3</sup>, John JL Morton<sup>1</sup>

<sup>1</sup>London Centre for Nanotechnology, UCL, United Kingdom

<sup>2</sup>National Physical Laboratory, United Kingdom

<sup>3</sup>Department of Physics, University of Sherbrooke, Canada

1130

**3-EO-SNQ-03S**

**Y-Ba-Cu-O nano SQUIDs fabricated with a focused helium ion beam**

Shane Cybart<sup>1</sup>

<sup>1</sup>UC Riverside, UC San Diego, United States of America

1145

**3-EO-SNQ-04S****The development of 3D nano-SQUID at SIMIT**Lei Chen<sup>1</sup>, Zeng Wang<sup>1</sup><sup>1</sup>Shanghai Institute of Microsystem and Information Technology (SIMIT), Chinese Academy of Sciences, China

1200

**3-EO-SNQ-05S****Grooved Dayem Nanobridges as Building Blocks of YBCO SQUID Magnetometers**Edoardo Trabaldo<sup>1</sup>, Christoph Pfeiffer<sup>1</sup>, Eric Andersson<sup>1</sup>, Riccardo Arpaia<sup>2</sup>, Alexei Kalaboukhov<sup>1</sup>, Dag Winkler<sup>1</sup>, Floriana Lombardi<sup>1</sup>, Thilo Bauch<sup>1</sup><sup>1</sup>Microtechnology and Nanoscience, Chalmers University of Technology, Sweden<sup>2</sup>Microtechnology and Nanoscience, Chalmers University of Technology, Sweden and Dipartimento di Fisica, Politecnico di Milano, Italy,

1215

**3-EO-SNQ-06S****SQUID readout with high dynamic range and intrinsic multiplexing capability**Daniel Richter<sup>1</sup>, Andreas Fleischmann<sup>1</sup>, Christian Enss<sup>1</sup>, Sebastian Kempf<sup>1</sup><sup>1</sup>Kirchhoff-Institute for Physics, Heidelberg University, Germany

1230

**3-EO-SNQ-07S****Fine tuning and optimization of SQUID devices parameters by a thermal annealing**Carmine Granata<sup>1</sup>, Antonio Vettoliere<sup>1</sup>, Massimo Valentino<sup>1</sup>, Berardo Ruggiero<sup>1</sup>, Paolo Silvestrini<sup>2</sup><sup>1</sup>Institute of Applied Sciences and Intelligent Systems - National Research Council, Italy<sup>2</sup>Department of Mathematics and Physics, University of Campania "L. Vanvitelli", Italy

1045-1245

**3-EO-FA - Device Fabrication and Applications**

ROOM: DOCHART

Chairs: Huabing Wang, Nanjing University and Joel Ullom, NIST and the University of Colorado

1045

**3-EO-FA-01I****Fast thermometry and ultrasensitive calorimetry for microwave photons**Jukka Pekola<sup>1</sup>, Bayan Karimi<sup>1</sup>, Libin Wang<sup>1</sup><sup>1</sup>Aalto University, Finland

1115

**Withdrawn**

1130	<b>3-EO-FA-03S</b> <b>Cryogenic Calibration of the RF Josephson Arbitrary Waveform Synthesizer</b> Justus Brevik <sup>1</sup> , Manuel Castellanos-Beltran <sup>1</sup> , Anna Fox <sup>1</sup> , Paul Dresselhaus <sup>1</sup> , Peter Hopkins <sup>1</sup> , Samuel Benz <sup>1</sup> <sup>1</sup> National Institute of Standards and Technology Boulder, United States of America
1145	<b>3-EO-FA-04S</b> <b>Increasing Integration of Superconductor Electronics Beyond One Million Devices</b> <u>Sergey Tolpygo</u> <sup>1</sup> <sup>1</sup> MIT Lincoln Laboratory, United States of America
1200	<b>3-EO-FA-05S</b> <b>Josephson Junction based Single Photon Counter at 14 GHz for searching Axions</b> <u>Leonid Kuzmin</u> <sup>1</sup> , Andrey Pankratov <sup>2</sup> , Leonid Revin <sup>2</sup> , Anna Gordeeva <sup>2</sup> , Nicolo Crescini <sup>3</sup> , Alexandr Sobolev <sup>4</sup> , Claudio Gatti <sup>5</sup> , Daniele Di Gioacchino <sup>5</sup> , Illichev Evgeni <sup>6</sup> , Anton Yablokov <sup>2</sup> , G Ruoso <sup>5</sup> , Giovanni Carugno <sup>5</sup> <sup>1</sup> Chalmers University of Technology, Sweden <sup>2</sup> Nizhny Novgorod State Technical University, <sup>3</sup> Dipartimento di Fisica e Astronomia, Italy <sup>4</sup> Institute of Radio Engineering and Electronics, Russia <sup>5</sup> INFN, Italy <sup>6</sup> Leibniz-IPHT, Germany
1215	<b>3-EO-FA-06S</b> <b>Neon focussed-ion-beams for nanofabrication of superconducting nanowires</b> <u>Paul Warburton</u> <sup>1</sup> , Oscar Kennedy <sup>1</sup> , Jamie Potter <sup>1</sup> , Nicolas Constantino <sup>1</sup> , Jonathan Burnett <sup>2</sup> , Jon Fenton <sup>3</sup> <sup>1</sup> University College London, United Kingdom <sup>2</sup> Chalmers University, Sweden <sup>3</sup> Imperial College London, United Kingdom
1230	<b>3-EO-FA-07S</b> <b>Superspintronics – towards ultra-low dissipation spin-electronics</b> <u>Niladri Banerjee</u> <sup>1</sup> <sup>1</sup> Loughborough University, United Kingdom

1045-1245	<b>3-LO-CA - Superconducting Cavities [SPECIAL SESSION]</b>	ROOM: M2 & M3
Chairs: Lance Cooley, Florida State University / National High Magnetic Field Laboratory and Frank Gerigk, CERN		

1045	<b>3-LO-CA-01I</b> <b>Overview - Materials Requirements For Superconducting RF Cavities</b> <u>Anne-Marie Valente-Feliciano</u> <sup>1</sup> <sup>1</sup> Thomas Jefferson National Accelerator Facility, United States of America
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1115

**3-LO-CA-021****Applying material science of pinning in high Jc materials to SRF materials**Lance Cooley<sup>1</sup><sup>1</sup>Florida State University, National High Magnetic Field Laboratory, United States of America

1145

**3-LO-CA-031****Theoretical understanding of pinning in SRF cavities**Alex Gurevich<sup>1</sup><sup>1</sup>Old Dominion University, United States of America

1215

**3-LO-CA-041****Materials fabrication in SRF cavities: beyond niobium**Sergio Calatroni<sup>1</sup><sup>1</sup>CERN, Switzerland

1245

**3-LO-CA-055****First Protons Beam Tests of Crab Cavities in the SPS**Rama Calaga<sup>1</sup><sup>1</sup>CERN, Switzerland1245-1400 **Lunch**

HALLS 1 &amp; 2

**Poster Session 3**

1400-1600

HALL 2

**3-EP-QQ - Quantum Devices and Quantum Information Processing**

Chairs: Martin Weides, University of Glasgow and Dongning Zheng, Institute of Physics, Chinese Academy of Sciences

**3-EP-QQ-S01****Implementation of coherent cross junctions for superconducting quantum circuits**Alexander Stehli<sup>1</sup>, Hannes Rotzinger<sup>1</sup>, Jan Brehm<sup>1</sup>, Alexey V. Ustinov<sup>1</sup>, Martin Weides<sup>2</sup><sup>1</sup>Karlsruhe Institute of Technology (KIT), Germany<sup>2</sup>University of Glasgow, United Kingdom and Karlsruhe Institute of Technology (KIT), Germany**3-EP-QQ-S02****Cross-junctions for superconducting quantum technology**Valentino Seferai<sup>1</sup>, Sergey Danilin<sup>1</sup>, Paul Baity<sup>1</sup>, Dmytro Bozhko<sup>1</sup>, Umberto Nastri<sup>1</sup>, Alessandro Casaburi<sup>1</sup>, Robert Hadfield<sup>1</sup>, Martin Weides<sup>1</sup><sup>1</sup>University of Glasgow, United Kingdom

**3-EP-QQ-S03****Self-guided transfer of spin-polarized wave packets in a hybrid quantum setup**Olena Zhytlukhina<sup>1</sup>, Mikhail Belogolovskii<sup>2</sup>, Paul Seidel<sup>3</sup><sup>1</sup>O.O. Galkin Donetsk Institute for Physics and Engineering, National Academy of Sciences of Ukraine, Ukraine<sup>2</sup>G.V. Kurdumov Institute for Metal Physics, National Academy of Sciences of Ukraine, Ukraine<sup>3</sup>Institut für Festkörperphysik, Friedrich-Schiller-Universität Jena, Germany**3-EP-QQ-S04****Quantum Phase Slip in NbN Nanowire-Embedded Coplanar Waveguide****Resonators**Jamie A. Potter<sup>1</sup>, J. C. Fenton<sup>2</sup>, Paul Warburton<sup>1</sup><sup>1</sup>University College London, United Kingdom<sup>2</sup>Imperial College London, United Kingdom**3-EP-QQ-S05****Reverse Annealing with Flux Qubits**Nedeen AlShariif<sup>1</sup>, Louis Fry-Bouriaux<sup>1</sup>, Paul A. Warburton<sup>1</sup><sup>1</sup>University College London, United Kingdom**3-EP-QQ-S06****Flux-noise spectroscopy with a superconducting transmon qubit**Tim Wolz<sup>1</sup>, Andre Schneider<sup>1</sup>, Jochen Braumüller<sup>2</sup>, Alexey V. Ustinov<sup>3</sup>, Martin Weides<sup>4</sup><sup>1</sup>Karlsruhe Institute of Technology (KIT), Germany<sup>2</sup>Massachusetts Institute of Technology, United States of America<sup>3</sup>Russian Quantum Center, Russia<sup>4</sup>University of Glasgow, United Kingdom**3-EP-QQ-S07****rf SQUID Metamaterials: A Nonlinear Setting for Applications**Steven Anlage<sup>1</sup><sup>1</sup>University of Maryland, United States of America**3-EP-QQ-I08****Symmetric rf-SQUID: universal device for Scalable Quantum Information Processing**Alessandro Miano<sup>1</sup>, Davide Massarotti<sup>1</sup>, Roberta Caruso<sup>1</sup>, Giovanni Piero Pepe<sup>2</sup>, Francesco Tafuri<sup>1</sup>, Oleg Mukhanov<sup>3</sup><sup>1</sup>University of Naples Federico II, Italy<sup>2</sup>CNR-SPIN, Italy<sup>3</sup>HYPRES - SeeQC, Inc., United States of America**3-EP-SQ - SQUID and SQIF Applications**

Chairs: Jane Ireland, National Physical Laboratory and Anna Ferring, Heidelberg University

**3-EP-SQ-I01****Fabrication induced excess flux noise in superconducting quantum devices**Anna Ferring<sup>1</sup>, Christian Enss<sup>1</sup>, Sebastian Kempf<sup>1</sup><sup>1</sup>Kirchhoff-Institute for Physics, Heidelberg University, Germany

**3-EP-SQ-I02****Proposal of SQUIDs with a period of half flux quantum in modulation patterns**

Yuto Takeshita<sup>1</sup>, Daiki Hasegawa<sup>1</sup>, Tomohiro Kamiya<sup>1</sup>, Kyosuke Sano<sup>1</sup>, Masamitsu Tanaka<sup>1</sup>, Taro Yamashita<sup>2</sup>, Akira Fujimaki<sup>1</sup>

<sup>1</sup>Department of Electronics, Nagoya University, Japan

<sup>2</sup>Department of Electronics, Nagoya University, JST-PRESTO, Japan

**3-EP-SQ-I03****Investigation of NanoSQUIDs Fabricated with a Range of Focused Ion Beam Sources**

Elias Polychroniou<sup>1</sup>, Tom Godfrey<sup>2</sup>, John Gallop<sup>3</sup>, David Cox<sup>3</sup>, George Long<sup>3</sup>, Jie Chen<sup>4</sup>, Ed Romans<sup>5</sup>, Mark Oxborrow<sup>6</sup>, Ling Hao<sup>7</sup>

<sup>1</sup>Imperial College London, National Physical Laboratory, United Kingdom

<sup>2</sup>London Centre for Nanotechnology, University College London, National Physical Laboratory, United Kingdom

<sup>3</sup>National Physical Laboratory, United Kingdom

<sup>4</sup>Brunel University, United Kingdom

<sup>5</sup>London Centre for Nanotechnology, University College London, United Kingdom

<sup>6</sup>Imperial College London, United Kingdom

<sup>7</sup>National Physical Laboratory, Imperial College London, United Kingdom

**3-EP-SQ-I04****Measurement of Magnetic particles by Hexagonal Pseudo 7-channel HTS SQUID Array**

Saburo Tanaka<sup>1</sup>, Moriki Kabasawa<sup>1</sup>, Kanji Hayashi<sup>1</sup>, Tekeyoshi Ohtani<sup>1</sup>

<sup>1</sup>Toyohashi University of Technology, Japan

**3-EP-SQ-I05****Flux-coupled asynchronous hybrid SQUID operating in a closed cycle GM cooler**

Ugur Yilmaz<sup>1</sup>, Sasan Razmkhah<sup>1</sup>, Ali Bozbey<sup>2</sup>, Pascal Febvre<sup>1</sup>

<sup>1</sup>IMEP-LAHC, University of Savoie Mont Blanc, France

<sup>2</sup>Department of Electrical and Electronics Engineering, TOBB University of Economics and Technology, Turkey

**3-EP-SQ-S06****YBCO nanoSQUIDs based on grain boundary junctions on MgO bicrystal substrates**

Jianxin Lin<sup>1</sup>, Benedikt Müller<sup>1</sup>, Julian Linek<sup>1</sup>, Max Karrer<sup>1</sup>, Malte Wenzel<sup>1</sup>, Reinhold Kleiner<sup>1</sup>, Dieter Kölle<sup>1</sup>

<sup>1</sup>Physikalisches Institut and Center for Quantum Science (CQ) in LISA+, Universität Tübingen, Germany

**3-EP-SQ-S07****Ultra-Low Field Magnetic Resonance Imaging Based On Hyperpolarized Xe-129**

Xiaolei Huang<sup>1</sup>

<sup>1</sup>Peter Grünberg Institute, Germany

**3-EP-SQ-S08****Hybrid cooling system with cryocooler and liquid-nitrogen for HTS-SQUID systems**

Tsunehiro Hato<sup>1</sup>, Akira Tsukamoto<sup>1</sup>, Seiji Adachi<sup>1</sup>, Keiichi Tanabe<sup>1</sup>

<sup>1</sup>Superconducting Sensing Technology Research Association, Japan

**3-EP-SQ-S09****SQUID NMR spin-echo magnetometer with dynamic nuclear polarization**

Seong-Joo Lee<sup>1</sup>, Jeong Hyun Shim<sup>1</sup>, Kwon Kyu Yu<sup>1</sup>, Seong-min Hwang<sup>1</sup>, Sangwon Oh<sup>1</sup>, Ingo Hilschenz<sup>1</sup>, Kiwoong Kim<sup>1</sup>

<sup>1</sup>Korea Research Institute of Standards and Science, South Korea

**3-EP-SQ-S10****Overhauser Hyperpolarisation MRI beyonds its limit in microtesla fields**

Ingo Hilschenz<sup>1</sup>, Jeong Hyun Shim<sup>1</sup>, Sangwon Oh<sup>1</sup>, Seong-Joo Lee<sup>1</sup>, Kwon Kyu Yu<sup>1</sup>, Seong-min Hwang<sup>1</sup>, Kiwoong Kim<sup>1</sup>

<sup>1</sup>Korea Research Institute of Standards and Science, South Korea

**3-EP-SQ-S11****Optimal Loop Size in Arrays of High Temperature SQUIDS**

Denis Crété<sup>1</sup>, Yves Lemaître<sup>2</sup>, Jérôme Lesueur<sup>3</sup>, Bruno Marcilhac<sup>2</sup>, Eliana Recoba-Pawlowski<sup>2</sup>, Juan Trastoy<sup>2</sup>

<sup>1</sup>Unité Mixte de Physique CNRS/THALES, THALES Research & Technology, France

<sup>2</sup>Unité Mixte de Physique CNRS/THALES, France

<sup>3</sup>Laboratoire de Physique et Matériaux, ESPCI - Paris Tech, France

**3-EP-SQ-S12****NanoSQUIDs based on Nb nanobridges**

M. I. Faley<sup>1</sup>, Rebecca Rodrigo<sup>1</sup>, R. E. Dunin-Borkowski<sup>1</sup>

<sup>1</sup>Peter Grünberg Institute, Germany

**3-EP-SQ-S13****Design and testing of HTS DC SQUIDs manufactured using ion irradiation**

Michal Janosek<sup>1</sup>, Elda Saunderson<sup>2</sup>, Paul Amari<sup>3</sup>, François Couëdo<sup>3</sup>, Cheryl Feuillet-Palma<sup>3</sup>, Nicolas Bergeal<sup>3</sup>, Jérôme Lesueur<sup>3</sup>, Ugur Yilmaz<sup>4</sup>, Coenrad Fourie<sup>5</sup>, Pascal Febvre<sup>4</sup>

<sup>1</sup>Department of Measurement, FEE, Czech Technical University, Czech Republic, Department of Electrical and Electronic Engineering, Stellenbosch University, Czech Republic

<sup>2</sup>DIRECTORATE SPACE SCIENCE, South African National Space Agency, Department of Electrical and Electronic Engineering, Stellenbosch University, South Africa

<sup>3</sup>Laboratoire de Physique et d'Etude des Matériaux - ESPCI-Paris-CNRS-UPMC PSL Research University, France

<sup>4</sup>IMEP-LAHC, CNRS UMR5130, Université Savoie Mont Blanc, France

<sup>5</sup>Department of Electrical and Electronic Engineering, Stellenbosch University, South Africa

**3-EP-SQ-S14****Two-dimensional magnetic field dependence of the dc-SQUID**

Normichi Watanabe<sup>1</sup>, Shota Atsumi<sup>1</sup>, Akiya Sean Ebana<sup>1</sup>, Kazuki Kobayashi<sup>1</sup>, Takuya Hikosaka<sup>1</sup>, Akiyoshi Nakayama<sup>1</sup>

<sup>1</sup>Kanagawa University, Japan

**3-EP-SQ-S16****Non-contacting guided wave testing for ferromagnetic pipes using HTS-SQUID**

Yoshimi Hatsukade<sup>1</sup>, Yuki Azuma<sup>1</sup>, Keisuke Watanabe<sup>1</sup>

<sup>1</sup>Kindai University, Japan

**3-EP-SQ-S17****High-Tc SQUID-based low-field NMR for human liver tumor discrimination**

Herng-Er Horng<sup>1</sup>, Yu-Ting Liao<sup>1</sup>, Hao-Wei Huang<sup>1</sup>, Dennis W. Hwang<sup>2</sup>, Shu-Hsien Liao<sup>1</sup>, Kai-Weng Huang<sup>3</sup>

<sup>1</sup>National Taiwan Normal University,

<sup>2</sup>Institute of Biomedical Sciences, Academia Sinica,

<sup>3</sup>Graduate Institute of Clinical Medicine, National Taiwan University,

**3-EP-SQ-S18****Compact Model Extraction for Superconducting Gradiometers in Magnetic Fields**

Kyle Jackman<sup>1</sup>, Coenrad Johann Fourie<sup>1</sup>

<sup>1</sup>Department of Electrical and Electronic Engineering, Stellenbosch University, South Africa

**3-EP-SQ-S19****High-Resolution Digital SQUID Magnetometer using sub-flux quantum feedback**

Hiroaki Myoren<sup>1</sup>, Kosuke Okabe<sup>1</sup>, Ryo Matsunawa<sup>1</sup>, Kohki Itagaki<sup>1</sup>, Masato Naruse<sup>1</sup>, Tohru Taino<sup>1</sup>

<sup>1</sup>Graduate School of Science and Engineering, Saitama University, Japan

**3-EP-SQ-S20****HTS SQUID-based relaxometry for Biomagnetic Imaging**

Shu-Hsien Liao<sup>1</sup>, Wei-Wen Chiu<sup>1</sup>, Yu-Ren Chen<sup>1</sup>, Han-Sheng Huang<sup>1</sup>

<sup>1</sup>National Taiwan Normal University, China, Republic of (Taiwan)

**3-EP-SQ-S21****Two-dimensional HTS SQIF array absolute magnetic field sensor**

Shane T. Keenan<sup>1</sup>, Emma E. Mitchell<sup>1</sup>, Jeina Y. Lazar<sup>1</sup>, Wendy E. Purches<sup>1</sup>, William Vasilevski<sup>1</sup>, Karl Wilson<sup>1</sup>

<sup>1</sup>CSIRO, Australia

**3-EP-SQ-S22****SQUID array with sub-micron Josephson junctions using cross-line process**

Xue Zhang<sup>1</sup>, Guofeng Zhang<sup>1</sup>, Liliang Ying<sup>1</sup>, Yongliang Wang<sup>1</sup>, Liangliang Rong<sup>1</sup>, Zhen Wang<sup>1</sup>

<sup>1</sup>Shanghai Institute of Microsystem and Information Technology (SIMIT), Chinese Academy of Sciences, China

**3-EP-SQ-S23****Improvement of low-Tc SQUID based ultra-low field magnetic resonance system**

Quan Tao<sup>1</sup>, Hui Dong<sup>1</sup>, Yongqiang Li<sup>1</sup>, Mengmeng Yu<sup>1</sup>

<sup>1</sup>Shanghai Institute of Microsystem and Information Technology (SIMIT), Chinese Academy of Sciences, China

**3-EP-SQ-S24****Multichannel low-noise Nb SQUID systems cooled by continuous reliquefaction**

Yong-Ho Lee<sup>1</sup>, Kwon-Kyu Yu<sup>1</sup>, Hyukchan Kwon<sup>1</sup>, Jin-Mok Kim<sup>1</sup>, Sang-Kil Lee<sup>1</sup>, Kiwoong Kim<sup>1</sup>

<sup>1</sup>Korea Research Institute of Standards and Science, South Korea

**3-EP-SQ-S25****Development of inductive microwave nanoSQUIDs for Quantum Technology**Tom Godfrey<sup>1</sup><sup>1</sup>University College London, National Physical Laboratory, United Kingdom**3-EP-SQ-S26****Optimization Design and Exploration of Airborne Superconducting FTMG**Jun Wu<sup>1</sup>, Liangliang Rong<sup>1</sup>, Longqing Qiu<sup>1</sup>, Shuling Zhang<sup>1</sup><sup>1</sup>Shanghai Institute of Microsystem and Information Technology (SIMIT), Chinese Academy of Sciences, China**3-EP-SQ-S27****Inductance extraction and simulation of small SQUID arrays and SQIFs**Colin Pegrum<sup>1</sup>, Emma Mitchell<sup>2</sup>, Karl Muller<sup>2</sup>, Chris Lewis<sup>2</sup>, Shane Keenan<sup>2</sup>, Wendy Purches<sup>2</sup>, Jeina Lazar<sup>2</sup>, Philip Fairman<sup>2</sup>, Alex Grancea<sup>2</sup>, Cathy Foley<sup>2</sup><sup>1</sup>Department of Physics, University of Strathclyde, United Kingdom<sup>2</sup>CSIRO Manufacturing, Australia**3-EP-SQ-S28****Progress towards innovative and energy efficient logic circuits**Sergio Pagano<sup>1</sup>, Gaetano Salina<sup>2</sup>, Anna Napoli<sup>3</sup>, Carmine Attanasio<sup>1</sup>, Carlo Barone<sup>1</sup>, Fabrizio Bobba<sup>1</sup>, Giovanni Carapella<sup>1</sup>, Antonio Leo<sup>1</sup>, Angela Nigro<sup>1</sup>, Roberto Cristiano<sup>4</sup>, Mikkel Ejrnaes<sup>4</sup>, Mikhail Lisitskiy<sup>4</sup>, Nadia Martucciello<sup>5</sup>, Giovanni Piero Pepe<sup>6</sup>, Loredana Parlato<sup>6</sup>, Matteo Cirillo<sup>7</sup>, Massimiliano Lucci<sup>7</sup>, Vittorio Merlo<sup>7</sup>, Antonino Messina<sup>3</sup>, Benedetto Militello<sup>3</sup><sup>1</sup>Physics Department, University of Salerno and INFN gc, Italy<sup>2</sup>Istituto Nazionale di Fisica Nucleare, Sezione di Roma Tor Vergata, Italy<sup>3</sup>Dipartimento Fisica e Chimica, Università di Palermo and INFN sez. Catania, Italy<sup>4</sup>CNR Istr. SPIN and INFN sez. Napoli, Italy<sup>5</sup>CNR Istr. SPIN and INFN gc. Salerno, Italy<sup>6</sup>Physics Department, University of Naples "Federico II" and INFN sez. Napoli, Italy<sup>7</sup>Physics Department, University of Roma "Tor Vergata" and INFN sez. Roma Tor Vergata, Italy**3-EP-SQ-S29****Performance Optimization of HTS rf-SQUID at Different Temperatures**Zhengshan Guo<sup>1</sup>, Kehuan Linghu<sup>1</sup>, Xinwei Cai<sup>1</sup>, Zizhao Gan<sup>1</sup><sup>1</sup>School of Physics, Peking University, China**3-LP-BM - Bulk Magnets and Specialised Magnetic Field Applications**

Chairs: Mark Ainslie, University of Cambridge and Antonio Morandi, University of Bologna

**3-LP-BM-I01****Waveform Controlled Pulsed Field Magnetisation in MgB<sub>2</sub>**Dominic Moseley<sup>1</sup>, Guillaume Matthews<sup>2</sup>, Sajjad Amirkhanlou<sup>2</sup>, Anthony Dennis<sup>1</sup>, Susannah Speller<sup>2</sup>, John Durrell<sup>1</sup>, Yee Kin Tsui<sup>1</sup>, Mark Ainslie<sup>1</sup><sup>1</sup>University of Cambridge, United Kingdom<sup>2</sup>University of Oxford, United Kingdom

**3-LP-BM-I02****Investigation of flux jumps during Pulsed Field Magnetization in MgB2 bulks**

Kazuya Yokoyama<sup>1</sup>, Tetsuo Oka<sup>2</sup>, Kévin Berger<sup>3</sup>, Rémi Dorget<sup>2</sup>, Michael Koblischka<sup>2</sup>, Mihai Grigorescu<sup>4</sup>, Mihail Burdusei<sup>4</sup>, Dan Batalu<sup>5</sup>, Gheorghe Aldica<sup>4</sup>, Petre Badica<sup>4</sup>, Masato Murakami<sup>2</sup>

<sup>1</sup>Ashikaga University, Japan

<sup>2</sup>Shibaura Institute of Technology, Japan

<sup>3</sup>GREEN - Université de Lorraine, France

<sup>4</sup>National Institute of Materials Physics, Romania

<sup>5</sup>University Politehnica of Bucharest, Romania

**3-LP-BM-I03****A Hybrid Trapped Field Magnet Lens (HTFML): proof of concept**

Sora Namba<sup>1</sup>, Hiroyuki Fujishiro<sup>1</sup>, Mark Ainslie<sup>2</sup>, Tomoyuki Naito<sup>1</sup>, Difan Zhou<sup>1</sup>, Yosuke Yanagi<sup>3</sup>

<sup>1</sup>Iwate University, Japan

<sup>2</sup>University of Cambridge, United Kingdom

<sup>3</sup>IMRA Material R&D Co., Ltd., Japan

**3-LP-BM-S04****Maximization of Trapped field in HTS ring magnets**

Muhammad Ali<sup>1</sup>, Jinxing Zheng<sup>2</sup>, Min Zhang<sup>1</sup>, Weijia Yuan<sup>1</sup>, Tian Lan<sup>1</sup>

<sup>1</sup>University of Strathclyde, United Kingdom

<sup>2</sup>Institute of Plasma Physics, Chinese Academy of Science, China

**3-LP-BM-S05****Design challenges in large split pair magnets for neutron scattering**

Roman Viznichenko<sup>1</sup>, Daniel Strange<sup>1</sup>, Wenbin Ma<sup>1</sup>, Andrew Twin<sup>1</sup>, Joe Brown<sup>1</sup>

<sup>1</sup>Oxford Instruments NanoScience, United Kingdom

**3-LP-BM-S06****Test of HTS Demonstrator Coils in the SULTAN Facility**

Xabier Sarasola<sup>1</sup>, Pierluigi Bruzzone<sup>1</sup>, Kamil Sedlak<sup>1</sup>, Boris Stepanov<sup>1</sup>, Jeroen van Nugteren<sup>2</sup>, Luca Bottura<sup>2</sup>, Gijs de Rijk<sup>2</sup>, Glyn Kirby<sup>2</sup>, Lucio Rossi<sup>2</sup>

<sup>1</sup>École Polytechnique Fédérale de Lausanne (EPFL), Swiss Plasma Center (SPC), Switzerland

<sup>2</sup>CERN, Switzerland

**3-LP-BM-S07****Test results of HTS split magnet for high-gradient magnetic separator**

Dmitry Diev<sup>1</sup>, Vladimir Lepehin<sup>1</sup>, Marina Makarenko<sup>1</sup>, Andrey Naumov<sup>1</sup>, Alexei Polyakov<sup>1</sup>, Mihail Surin<sup>1</sup>, Daria Shutova<sup>1</sup>, Vladimir Scherbakov<sup>1</sup>

<sup>1</sup>NRC Kurchatov Institute, Russia

**3-LP-BM-S08****New Structure of Superconducting DC Induction Heater without Skin Effect**

Xufeng Yan<sup>1</sup>, Shaotao Dai<sup>1</sup>, Jing Zhang<sup>1</sup>, Ying Xu<sup>1</sup>

<sup>1</sup>Beijing Jiaotong University, China

**3-LP-BM-S09****Test of a Stationary Flux Pump for an HTS Coil in Persistent Current Mode**Syeon Lee<sup>1</sup>, Woo-Seok Kim<sup>1</sup>, Ji-Kwang Lee<sup>2</sup>, Kyeongdal Choi<sup>1</sup><sup>1</sup>Korea Polytechnic University, South Korea<sup>2</sup>Woosuk University, South Korea

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**3-LP-HC - HTS Cables**

Chairs: Yifeng Yang, University of Southampton and Andrea Zappatore, Politecnico di Torino

**3-LP-HC-I01****Evaluation of superconducting joints between different kind of wires**Hiroyuki Takewa<sup>1</sup><sup>1</sup>Tokai University, Japan**3-LP-HC-I02****AC Losses Analysis in stack of 2G HTS tapes in a coil**Vasily Zubko<sup>1</sup>, Vitaly Vysotsky<sup>1</sup>, Sergey Fetisov<sup>1</sup>, Sergey Zanegin<sup>1</sup>, Igor Rodin<sup>2</sup>, Elena Zapretilina<sup>2</sup><sup>1</sup>Russian Scientific R&D Cable Institute, Russia<sup>2</sup>D.V. Efremov Institute of Electrophysical Apparatus, Russia**3-LP-HC-I03****Novel HTS coil protection method using secondary windings as a quench heater**Yuta Onodera<sup>1</sup>, Toshiyuki Mito<sup>1</sup>, Kazuya Takahata<sup>1</sup><sup>1</sup>National Institute for Fusion Science, Japan**3-LP-HC-S04****Operation Characteristics of a Smart Insulation Coil with a Defected REBCO wire**Hyung-Wook Kim<sup>1</sup>, Young-Sik Jo<sup>1</sup>, Seog-Whan Kim<sup>1</sup><sup>1</sup>Korea Electrotechnology Research Institute, South Korea**3-LP-HC-S05****Current bypassing characteristics of NI HTS coils by metallic protection ring**Seokbeom Kim<sup>1</sup>, Takahiro Tatsuta<sup>1</sup>, Daisuke Nishikawa<sup>1</sup>, Hiroshi Ueda<sup>1</sup><sup>1</sup>Okayama University, Japan**3-LP-HC-S06****Magnetic Shielding of Long Paraboloid Structures in Inhomogeneous Magnetic Field**Jozef Kvitkovic<sup>1</sup>, Kalin Burnside<sup>1</sup>, Min Zhang<sup>2</sup>, Zhenyu Zhang<sup>1</sup>, Sastry Pamidi<sup>1</sup><sup>1</sup>Center for Advanced Power Systems, Florida State University, United States of America<sup>2</sup>Department of Electronic and Electrical Engineering, University of Strathclyde, United Kingdom

**3-LP-HC-S07****Study on conditions to reuse quenched HTS coil**

Hifumi Toriyama<sup>1</sup>, Akihiro Nomoto<sup>1</sup>, Takumalchikawa<sup>1</sup>, Tomoaki Takao<sup>1</sup>, Kazuya Nakamura<sup>1</sup>, Osami Tsukamoto<sup>1</sup>, MITSUHO Furuse<sup>2</sup>

<sup>1</sup>Sophia University, Japan

<sup>2</sup>National Institute of Advanced Industrial and Technology Lab., Japan

**3-LP-HC-S08****Magnetization Loss Analysis of HTS Solenoid Coils wound with Striated CORC**

Jisung Goo<sup>1</sup>, Seyeon Lee<sup>1</sup>, Woo-Seok Kim<sup>1</sup>, Ji-Kwang Lee<sup>2</sup>, Kyeongdal Choi<sup>1</sup>

<sup>1</sup>Korea Polytechnic University, South Korea

<sup>2</sup>Woosuk University, South Korea

**3-LP-HC-S09****Quench Protection for Superconducting Insertion Magnets**

Michael Green<sup>1</sup>

<sup>1</sup>Lawrence Berkeley Laboratory, United States of America

**3-LP-HC-S10****Electromagnetic Optimization and AC Loss Analysis of a Hybrid Solenoidal Magnet**

Yue Wu<sup>1</sup>, Jin Fang<sup>1</sup>

<sup>1</sup>Beijing Jiaotong University, China

**3-LP-HC-S11****HTS Coils Wound by Bundle Conductor Composed of No-insulated REBCO Tapes**

Tomonori Watanabe<sup>1</sup>, Shigeo Nagaya<sup>1</sup>, Satoshi Fukui<sup>2</sup>, Atsushi Ishiyama<sup>3</sup>

<sup>1</sup>Chubu Electric Power Co., Inc., Japan

<sup>2</sup>Niigata University, Japan

<sup>3</sup>Waseda University, Japan

**3-LP-HC-S12****Quench Behaviour of Multi-Layer High Temperature Superconducting CORC Cables**

Zixuan Zhu<sup>1</sup>, Yawei Wang<sup>2</sup>, Min Zhang<sup>2</sup>, Weijia Yuan<sup>2</sup>

<sup>1</sup>University of Bath, United Kingdom

<sup>2</sup>University of Strathclyde, United Kingdom

**3-LP-HC-S13****Transverse load FE modeling on multilayered CORC® cables and wires**

Anvar Valiyaparambil Abdulsalam<sup>1</sup>, Shahriar Hossain<sup>2</sup>, Timothy J Haugan<sup>3</sup>, Jeremy D Weiss<sup>4</sup>, Danko van der Laan<sup>4</sup>, Arend Nijhuis<sup>5</sup>

<sup>1</sup>University of Twente, Faculty of Science & Technology, The Netherlands, University of Wollongong, Institute for Superconducting and Electronic Materials, Australia

<sup>2</sup>University of Wollongong, Institute for Superconducting and Electronic Materials, University of Queensland, School of Mechanical and Mining Engineering, Australia

<sup>3</sup>US Air Force Research Laboratory, United States of America

<sup>4</sup>Advanced Conductor Technologies and University of Colorado, United States of America

<sup>5</sup>University of Twente, Faculty of Science & Technology, The Netherlands

**3-LP-HC-S14****Analysis and optimisation of the MgB<sub>2</sub> splices in the SC-Link for the HL-LHC**Iole Falorio<sup>1</sup>, Yifeng Yang<sup>2</sup>, Christian Barth<sup>1</sup>, Jerome Fleiter<sup>1</sup>, Amalia Ballarino<sup>1</sup><sup>1</sup>CERN, Switzerland<sup>2</sup>University fo Southampton, United Kingdom**3-LP-HC-S15****Characterising MgB<sub>2</sub> Multi-filament Cables for Future Electric Aircraft**Tian Lan<sup>1</sup>, Min Zhang<sup>1</sup>, Weijia Yuan<sup>1</sup>, Muhammad Ali<sup>1</sup><sup>1</sup>University of Strathclyde, United Kingdom**3-LP-HC-S16****Twist pitch effect on the critical current density distribution of CORC cables**Muhammad Umar Fareed<sup>1</sup>, Bright Robert<sup>1</sup>, Harold Ruiz<sup>1</sup><sup>1</sup>University of Leicester, United Kingdom**3-LP-HC-S17****Flux Pinning Docking Interfaces in satellites using trapped field magnets**Michael Koblischka<sup>1</sup>, Pavan Kumar Naik<sup>1</sup>, Anjela Koblischka-Veneva<sup>1</sup>, Masato Murakami<sup>1</sup>, Quentin Nouailhetas<sup>2</sup>, Kévin Berger<sup>2</sup>, Bruno Douine<sup>2</sup>, Denis Gokhfeld<sup>3</sup><sup>1</sup>Shibaura Institute of Technology, Japan<sup>2</sup>GREEN University of Lorraine, France<sup>3</sup>Kirensky Institute of Physics, Russia**3-LP-HC-S18****AC loss of Double Pancake Coils wound with MgB<sub>2</sub> Rutherford Cable**Toshihiro Komagome<sup>1</sup>, Kenichi Tsukada<sup>1</sup>, Masayuki Hoshino<sup>1</sup>, Takataro Hamajima<sup>1</sup>, Yasuhiro Makida<sup>2</sup>, Takakazu Shintomi<sup>2</sup>, Tomoaki Takao<sup>3</sup>, Tsuyoshi Yagai<sup>3</sup>, Makoto Tsuda<sup>4</sup>, Daisuke Miyagi<sup>4</sup>, Naoki Hirano<sup>5</sup>, Masaru Tomita<sup>6</sup>, Taiki Onji<sup>6</sup>, Atsushi Shigemori<sup>7</sup>, Kentaro Nakajima<sup>7</sup><sup>1</sup>Mayekawa MFG. Co., Ltd., Japan<sup>2</sup>High Energy Accelerator Research Organization, Japan<sup>3</sup>Sophia University, Japan<sup>4</sup>Tohoku University, Japan<sup>5</sup>Chubu Electric Power Co., Inc., Japan<sup>6</sup>Railway Technical Research Institute, Japan<sup>7</sup>IWATANI Corporation, Japan**3-LP-HM - HTS Magnets**

Chairs: Amalia Ballarino, CERN and Andrea Zappatore, Politecnico di Torino

**3-LP-HM-101****Bi-2212 coil testing enabled by high field, large bore research magnets**Steven Ball<sup>1</sup>, Andrew Twin<sup>1</sup>, David Warren<sup>1</sup>, Ziad Melhem<sup>1</sup>, Richard Wotherspoon<sup>1</sup>, Thomas Herrmannsdörfer<sup>2</sup><sup>1</sup>Oxford Instruments, United Kingdom<sup>2</sup>Dresden High Magnetic Field Laboratory, Germany

**3-LP-HM-I02****Experimental Results of Various Metal-Clad REBCO Tapes for No-Insulation Coils**

Jae-Hun Lee<sup>1</sup>, Myunghwan Ku<sup>1</sup>, Yungil Kim<sup>1</sup>, Seonghun Oh<sup>1</sup>, Byoungjean Mean<sup>1</sup>, Jaemin Kim<sup>1</sup>, Seung Yong Hahn<sup>2</sup>, Young-Soon Kim<sup>1</sup>, Hunju Lee<sup>1</sup>, SeungHyun Moon<sup>1</sup>

<sup>1</sup>SuNAM Co., Ltd., South Korea

<sup>2</sup>Seoul National University, South Korea

**3-LP-HM-S03****A High-Field and High-Homogeneity Superconducting Magnet Design for Cephalic MRI**

Yavuz Ozturk<sup>1</sup>, Boyang Shen<sup>1</sup>, Jun Ma<sup>1</sup>, Jamie Gawith<sup>1</sup>, Tim Coombs<sup>1</sup>

<sup>1</sup>University of Cambridge, United Kingdom

**3-LP-HM-S04****The effect of stress on the charging characteristics in a no-insulation magnet**

Donghui Liu<sup>1</sup>, Huadong Yong<sup>1</sup>, Youhe Zhou<sup>1</sup>

<sup>1</sup>Lanzhou University, China

**3-LP-HM-S05****Operating Characteristics of MIT ReBCO coil during an excitation**

Mingzhi Guan<sup>1</sup>

<sup>1</sup>Institute of Modern Physics, Chinese Academy of Sciences, China

**3-LP-HM-S06****Stand-alone test and strain analysis of a 9-T REBCO insert coil**

Yufan Yan<sup>1</sup>, Timing Qu<sup>1</sup>, Yunfei Tan<sup>2</sup>, Mingzhi Guan<sup>3</sup>, Beimin Wu<sup>3</sup>, Canjie Xin<sup>3</sup>

<sup>1</sup>Department of Mechanical Engineering, Tsinghua University, China

<sup>2</sup>Huazhong University of Science and Technology, China

<sup>3</sup>Institute of Modern Physics, Chinese Academy of Sciences, China

**3-LP-HM-S07****Conduction Cooled HTS Magnet Generating 6 T High Uniformity Magnetic Field**

Ion Dobrin<sup>1</sup>, Dan Enache<sup>1</sup>, Alexandru Mihail Morega<sup>2</sup>, Andrei Dobrin<sup>1</sup>, Iuliu Popovici<sup>1</sup>, Mihaela Morega<sup>2</sup>, George Dumitru<sup>1</sup>, Radu Pintea<sup>1</sup>

<sup>1</sup>National Institute for Research and Development in Electrical Engineering ICPE-CA, Applied Superconductivity Laboratory, Romania

<sup>2</sup>University Politehnica of Bucharest, Faculty of Electrical Engineering, Romania

**3-LP-HM-S08****Thermal stability of conduction-cooled no-insulated HTS coils up to 400 A**

Álvaro Cubero<sup>1</sup>, Ana Belén Núñez-Chico<sup>1</sup>, Rafael Navarro<sup>1</sup>, Luis Alberto Angurel<sup>1</sup>, Elena Martínez<sup>1</sup>

<sup>1</sup>ICMA CSIC, Universidad de Zaragoza, Spain

**3-LP-HM-S09****Design and fabrication of a 5.8T conduction-cooled superconducting magnet**

Qiangwang Hao<sup>1</sup>

<sup>1</sup>Institute of Plasma Physics Chinese Academy of Sciences, China

**3-LP-HM-S10****Investigation on the Ultra-high field Flux Pumped superconducting magnets**Chao Li<sup>1</sup><sup>1</sup>University of Cambridge, United Kingdom**3-LP-HM-S11****Analysis of Unbalance Force and Support Structure for 30T Superconducting Magnet**Lei Wang<sup>1</sup>, Qiuliang Wang<sup>1</sup>, Jianhua Liu<sup>1</sup>, Yaohui Wang<sup>1</sup>, Lang Qin<sup>1</sup><sup>1</sup>Institute of Electrical Engineering, Chinese Academy of Sciences, China**3-LP-HM-S12****Development of a 20T 100mm Cold Bore Superconducting Magnet System**Wenbin Ma<sup>1</sup><sup>1</sup>Oxford Instruments NanoScience, United Kingdom**3-LP-HM-S13****A portable magnetization setup for compact bulk superconductor magnet systems**Yeekin Tsui<sup>1</sup>, Anthony R. Dennis<sup>1</sup>, Dominic Moseley<sup>1</sup>, Vito Cientanni<sup>1</sup>, Yunhua Shi<sup>1</sup>, John H. Durrell<sup>1</sup>, Mark Ainslie<sup>1</sup><sup>1</sup>University of Cambridge, United Kingdom**3-LP-HM-S14****Flux-pumped ultra-high current parallel-winding no-insulation HTS pancake coils**Jianzhao Geng<sup>1</sup>, Rod Badcock<sup>1</sup>, Chris Bumby<sup>1</sup><sup>1</sup>Robinson Institute, Victoria University of Wellington, Australia

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**3-LP-LE - Levitation SMES and Mechanica**

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Chairs: Frank Werfel, Adelwitz Technologiezentrum GmbH (ATZ) and Yong Zhou, Wuhan Institute of Marine Electric Propulsion

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**3-LP-LE-I01****Improved hysteretic loss measurement on a rotating superconducting bearing**Tilo Espenahn<sup>1</sup>, Maria Sparing<sup>1</sup>, Mahmud Hossain<sup>2</sup>, Günter Fuchs<sup>1</sup>, Anwar Abdkader<sup>2</sup>, Chokri Cherif<sup>2</sup>, Cornelius Nielsch<sup>1</sup>, Ruben Hühne<sup>1</sup><sup>1</sup>IFW Dresden, Germany<sup>2</sup>Institute of Textile Machinery and High Performance Material Technology, Technische Universität Dresden, Germany**3-LP-LE-I02****Experimental investigation of a SMES-FCL multifunctional coils in DC-systems**Mariam Elshiekh<sup>1</sup>, Abdelrahman Elwakeel<sup>1</sup>, Sriharsha Venuturumilli<sup>1</sup>, Xiaoze Pei<sup>1</sup>, Min Zhang<sup>1</sup>, Weijia Yuan<sup>1</sup><sup>1</sup>University of Bath, United Kingdom

**3-LP-LE-103****Design results of a 500 kJ / 200 kW conduction cooled MgB<sub>2</sub> SMES magnet**

Antonio Morandi<sup>1</sup>, Umberto Melaccio<sup>2</sup>, Pier Luigi Ribani<sup>2</sup>, Simonetta Turtù<sup>3</sup>, Luigi Affinito<sup>4</sup>, Matteo Tropeano<sup>5</sup>, Capelluto Alessio<sup>6</sup>

<sup>1</sup>University of Bologna, DEI – Department of Electrical, Electronic and Information Engineering, ENEA Frascati Research Center, Department of Fusion, ASG Superconductors, Italy

<sup>2</sup>University of Bologna, DEI – Department of Electrical, Electronic and Information Engineering, Italy

<sup>3</sup>ENEA Frascati Research Center, Italy

<sup>4</sup>ENEA Frascati Research Center, Department of Fusion, Italy

<sup>5</sup>ASG Superconductors - Columbus Division, Italy

<sup>6</sup>ASG Superconductors, Italy

**3-LP-LE-S04****Levitation force of jointless superconducting loops in a wide temperature range.**

Maxim Osipov<sup>1</sup>, Alexandr Starikovskii<sup>1</sup>, Sergej Pokrovskii<sup>1</sup>, Dmitry Abin<sup>1</sup>, Irina Anischenko<sup>1</sup>, Igor Rudnev<sup>1</sup>

<sup>1</sup>National Research Nuclear University MEPhI, Russia

**3-LP-LE-S05****Rotating superconducting magnetic bearing as twist element in ring spinning**

Maria Sparing<sup>1</sup>, Tilo Espenahn<sup>1</sup>, Mahmud Hossain<sup>2</sup>, Anwar Abdkader<sup>2</sup>, Chokri Cherif<sup>2</sup>, Cornelius Nielsch<sup>1</sup>, Ruben Hühne<sup>1</sup>

<sup>1</sup>IFW Dresden, Germany

<sup>2</sup>Institute of Textile Machinery and High Performance Material Technology, Technical University of Dresden, Germany

**3-LP-LE-S06****Effects of an added ring-shaped magnet on superconducting magnetic levitation**

Muneo Futamura<sup>1</sup>, Shunsuke Homma<sup>1</sup>

<sup>1</sup>Akita Prefectural University, Japan

**3-LP-LE-S07****Arrangement Optimization of Magnetic Levitation Systems with HTS Coil and Bulks**

Yasuhiro Kaneko<sup>1</sup>, Toshiki Kitamura<sup>1</sup>, Tomoaki Takao<sup>1</sup>

<sup>1</sup>Sophia University, Japan

**3-LP-LE-S08****A self-adaptive oscillator applying to superconductive magnetic levitation**

Koki Ochiai<sup>1</sup>, Toshihiko Sugiura<sup>1</sup>

<sup>1</sup>Keio University, Japan

**3-LP-LE-S09****Using of HTS tape coils for the design of a magnetic bearing**

Ekaterina Kurbatova<sup>1</sup>, Pavel Kurbatov<sup>1</sup>, Egor Kuschenko<sup>1</sup>, Yurii Kulakov<sup>1</sup>

<sup>1</sup>National Research University, Moscow Power Engineering Institute, Russia

**3-LP-LE-S10****Optimal Tuning of Electromagnetic Shunt Damper in Superconducting Levitation**

Keisuke Uchino<sup>1</sup>, Toshihiko Sugiura<sup>1</sup>

<sup>1</sup>Keio University, Japan

**3-LP-LE-S11****The FEM simulation of thrust magnetic bearing**Irina Anischenko<sup>1</sup>, Sergei Pokrovskii<sup>1</sup>, Igor Rudnev<sup>1</sup><sup>1</sup>National Research Nuclear University MEPhI, Russia**3-LP-LE-S12****Design of the Semi-Active Absorber for HTS Maglev Vehicles Based on PD Control**Haitao Li<sup>1</sup>, Zigang Deng<sup>1</sup>, Zhihao Ke<sup>1</sup>, Jinbo Yu<sup>1</sup>, Jianghua Zhang<sup>1</sup>, Jun Zheng<sup>1</sup><sup>1</sup>Southwest Jiaotong University, China**3-LP-LE-S13****Quench analysis of an MgB2 SMES magnet with cryogen free cooling**Antonio Morandi<sup>1</sup>, Umberto Melaccio<sup>1</sup>, Pier Luigi Ribani<sup>1</sup>, Simonetta Turtu<sup>2</sup>, Luigi Affinito<sup>2</sup><sup>1</sup>University of Bologna, Italy<sup>2</sup>ENEA Frascati Research Center, Department of Fusion, Italy**3-LP-LE-S14****Space Propulsion Measurement based on HTS Magnetic Bearing**Wenjiang Yang<sup>1</sup>, Yu Ji<sup>1</sup>, Long Yu<sup>2</sup>, Zhaoxin Liu<sup>1</sup>, Mao Ye<sup>3</sup><sup>1</sup>Beihang University, China<sup>2</sup>Information Technology Center, Aviation Industry Corporation of China, China<sup>3</sup>Navigation and control technology institute, China North Industries Group Corporation, China**3-LP-LE-S15****Hybrid FCL-SMES device**Shuki Wolfus<sup>1</sup>, Yasha Nikulshin<sup>1</sup>, Alex Friedman<sup>1</sup>, Eliezer Perel<sup>1</sup>, Yosef Yeshurun<sup>1</sup><sup>1</sup>Bar-Ilan University, Israel**3-LP-LE-S16****A Novel Superconducting Instant Energy Storage**Ying Xin<sup>1</sup>, Qian Dong<sup>1</sup>, Bo Tian<sup>2</sup>, Yuyan Wen<sup>1</sup>, Quan Li<sup>3</sup><sup>1</sup>Tianjin University, China<sup>2</sup>Futong Group (Tianjin) Superconductor Technologies and Applications Co.,Ltd., China<sup>3</sup>The University of Edinburgh, United Kingdom**3-LP-LE-S17****The research of critical current of SMES coil constructed of cork wire**Zhidun Zeng<sup>1</sup>, Zixuan Zhu<sup>2</sup>, Min Zhang<sup>1</sup>, Weijia Yuan<sup>1</sup><sup>1</sup>University of Strathclyde, United Kingdom<sup>2</sup>University of Bath, United Kingdom**3-LP-LE-S18****12 T REBCO magnet used as compact 1 MJ pulse-power SMES**Julien Vialle<sup>1</sup>, Pascal Tixador<sup>2</sup>, Jérémie Ciceron<sup>2</sup>, Arnaud Badel<sup>3</sup>, Forest Frédérick<sup>4</sup>, Raphael Pasquet<sup>4</sup><sup>1</sup>Université Grenoble Alpes, CNRS, France<sup>2</sup>Université Grenoble Alpes, France<sup>3</sup>Tohoku University, Japan<sup>4</sup>Sigmaphi, France

**3-LP-LE-S19****Evaluation on Applicability of No-insulation REBCO Coil to SMES**

Tetsuro Kinpara<sup>1</sup>, Masato Ohmure<sup>1</sup>, Atsushi Ishiyama<sup>1</sup>, Tomonori Watanabe<sup>2</sup>, Shigeo Nagaya<sup>2</sup>

<sup>1</sup>Waseda University, Japan

<sup>2</sup>Chubu Electric Power Co., Inc, Japan

**3-LP-NM - Numerical Modelling: Large Scale Devices**

Chairs: Min Zhang, University of Strathclyde and Benoît Vanderheyden, Liège University

**3-LP-NM-I01****Numerical Analysis and Optimization of Large Tuned-Insulation HTS Magnets**

Jeroen van Nugteren<sup>1</sup>, Robert Slade<sup>2</sup>, Lucio Rossi<sup>1</sup>, Rod Bateman<sup>2</sup>, Greg Brittles<sup>2</sup>, Glyn Kirby<sup>1</sup>, Marcel Kruip<sup>2</sup>, Bas van Nugteren<sup>2</sup>, Martin Wilson<sup>2</sup>

<sup>1</sup>CERN, Switzerland

<sup>2</sup>Tokamak Energy, United Kingdom

**3-LP-NM-I02****3D modeling and measurements of a multi-tape pancake coil with coupling currents**

Milan Kapolka<sup>1</sup>, Jan Kovac<sup>1</sup>, Enric Pardo<sup>1</sup>

<sup>1</sup>Institute of Electrical Engineering, Slovak Academy of Sciences, Slovakia

**3-LP-NM-I03****Quench protection of the BabylAIXO magnet system**

Nikolay Bykovskiy<sup>1</sup>, Alexey Dudarev<sup>1</sup>, Helder Filipe Pais Da Silva<sup>1</sup>, Herman H J ten Kate<sup>1</sup>

<sup>1</sup>CERN, Switzerland

**3-LP-NM-I04****Modeling and measurement of the voltage signal in HTS flux pumps**

Asef Ghabeli<sup>1</sup>, Enric Pardo<sup>1</sup>, Mykola Solovyov<sup>1</sup>, Jan Souc<sup>1</sup>

<sup>1</sup>Institute of Electrical Engineering, Slovak Academy of Sciences, Slovakia

**3-LP-NM-S05****Towards real-time simulation of large-scale HTS systems using T-A formulation**

Edgar Berrospe-Juarez<sup>1</sup>, Víctor Zermeño<sup>2</sup>, Frederic Trillaud<sup>1</sup>, Francesco Grilli<sup>3</sup>

<sup>1</sup>National Autonomous University of Mexico, Mexico

<sup>2</sup>NKT GmbH & Co. KG, Germany

<sup>3</sup>Karlsruhe Institute of Technology (KIT), Germany

**3-LP-NM-S06****A Hierarchical Multiscale Delamination Model of REBCO Coated Conductor Coils**

Peifeng Gao<sup>1</sup>, Hao Duan<sup>2</sup>, Xingzhe Wang<sup>1</sup>, You-he Zhou<sup>1</sup>

<sup>1</sup>College of Civil Engineering and Mechanics, Lanzhou University, China

<sup>2</sup>Lanzhou University, China

**3-LP-NM-S07****Improving multi-scale model with homogenization model**

Lei Wang<sup>1</sup>, Yuntao Song<sup>2</sup>, Yuanxi Wan<sup>1</sup>, Jinxing Zheng<sup>2</sup>

<sup>1</sup>University of Science and Technology of China, China

<sup>2</sup>Institute of Plasma Physics, Chinese Academy of Sciences, China

**3-LP-NM-S08****Quench and mechanical modelling of no-insulation HTS magnet with multiple coils**

Yawei Wang<sup>1</sup>, Hongyu Bai<sup>2</sup>, Min Zhang<sup>1</sup>, Weijia Yuan<sup>1</sup>

<sup>1</sup>University of Strathclyde, United Kingdom

<sup>2</sup>National High Magnetic Field Laboratory, Florida State University, United States of America

**3-LP-NM-S09****A new approach for 3D modelling of HTS stacks magnetized by pulsed field**

Shengnan Zou<sup>1</sup>, Wei Chen<sup>1</sup>, Anup Patel<sup>2</sup>, Algirdas Baskys<sup>2</sup>, Francesco Grilli<sup>3</sup>

<sup>1</sup>Quanzhou Institute of Equipment Manufacturing Haixi Institute, Chinese Academy of Sciences, Germany

<sup>2</sup>University of Cambridge, United Kingdom

<sup>3</sup>Karlsruhe Institute of Technology (KIT), Germany

**3-LP-NM-S10****3D Modeling of Pulsed Field Magnetization of arrays of HTS bulks**

Jakub Kapek<sup>1</sup>, Kévin Berger<sup>1</sup>, Frederic Trillaud<sup>2</sup>, Hocine Menana<sup>1</sup>, Melika Hinaje<sup>1</sup>, Jean Lévéque<sup>1</sup>

<sup>1</sup>GREEN - Université de Lorraine, France

<sup>2</sup>Instituto de Ingeniería, Universidad Nacional Autonoma de Mexico, Mexico

**3-LP-NM-S11****A 2D/3D model to match local  $J_c$  map and macroscopic scale behavior of REBCO tape**

Blandine Rozier<sup>1</sup>, Arnaud Badel<sup>2</sup>, Brahim Ramdane<sup>1</sup>, Gérard Meunier<sup>1</sup>, Takumi Suzuki<sup>3</sup>, Takanobu Kiss<sup>3</sup>

<sup>1</sup>G2Elab, France

<sup>2</sup>Tohoku University - IMR, France

<sup>3</sup>Kyushu University, Japan

**3-LP-NM-S12****Effect of ReBCO internal resistance on quench propagation velocity at 77 K in SF**

Maxime Matras<sup>1</sup>, Gianluca De Marzi<sup>1</sup>, Jerome Fleiter<sup>1</sup>, Amalia Ballarino<sup>1</sup>

<sup>1</sup>CERN, Switzerland

**3-LP-NM-S13****AC Losses and Induced Fields in HTS Coil Wound Using Two-Ply Coated Conductors**

Hiroki Yokoyama<sup>1</sup>, Kazuhiko Kajikawa<sup>1</sup>, Satoshi Awaji<sup>2</sup>, Koki Takahashi<sup>2</sup>, Tatsunori Okada<sup>2</sup>

<sup>1</sup>Kyushu University, Japan

<sup>2</sup>Tohoku University, Japan

**3-LP-NM-S14****Experimental and Numerical Transport AC Loss in Bifilar Stack with Large Current**

Wenjuan Song<sup>1</sup>, Xiaoze Pei<sup>1</sup>, Zhenan Jiang<sup>2</sup>, Mike Staines<sup>2</sup>, Jin Fang<sup>3</sup>

<sup>1</sup>Department of Electronic and Electrical Engineering, University of Bath, United Kingdom

<sup>2</sup>Robinson Research Institute, Victoria University of Wellington, New Zealand

<sup>3</sup>School of Electrical Engineering, Beijing Jiaotong University, China

**3-LP-NM-S15****Simulation of AC losses in racetrack coils wound with striates HTS tapes**

Marco Bianchetti<sup>1</sup>, Bart de Bruyn<sup>2</sup>, Dave Krop<sup>1</sup>, Elena Lomonova<sup>1</sup>

<sup>1</sup>Eindhoven University of Technology, The Netherlands

<sup>2</sup>Prodrive Technologies, The Netherlands

**3-LP-NM-S16****Modelling of AC Loss in HTS Coils for Superconducting Wireless Power Transfer**

Hongyi Chen<sup>1</sup>, Quan Li<sup>1</sup>

<sup>1</sup>University of Edinburgh, United Kingdom

**3-LP-NM-S17****A novel method for quench characteristic analysis of YBCO double pancake coil**

Ming Li<sup>1</sup>, Yuntao Song<sup>1</sup>, Jinxing Zheng<sup>1</sup>

<sup>1</sup>Institute of Plasma Physics Chinese Academy of Sciences, China

**3-LP-NM-S18****Optimsation of Rotating Flux Pumping Devices for Superconducting Magnets**

Markus Mueller<sup>1</sup>, Han Gao<sup>1</sup>, Joseph Burchell<sup>1</sup>, Qiwen Wu<sup>1</sup>

<sup>1</sup>University of Edinburgh, United Kingdom

**3-MP-CC3 - Coated Conductors 3**

Chairs: Shintetsu Kanazawa, Muroran Institute of Technology and Shuhei Funaki, Shimane University

**3-MP-CC3-I01****Towards Transient Liquid Assisted Growth (TLAG) of Thick YBCO Coated-Conductors**

Adrià Pacheco Aceña<sup>1</sup>, Albert Queraltó<sup>1</sup>, Max Sieger<sup>1</sup>, Aitor Gallego<sup>2</sup>, Flavio Pino<sup>1</sup>, Susagna Ricart<sup>3</sup>, Teresa Puig<sup>1</sup>, Xavier Obradors<sup>1</sup>

<sup>1</sup>ICMAB-CSIC, Spain

<sup>2</sup>Universitat Autònoma de Barcelona (UAB), Spain

<sup>3</sup>ICMAB-CSIC, Universitat Autònoma de Barcelona (UAB), Spain

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**3-MP-CC3-I02****Fabrication technology of high  $J_c$  coated conductor for high speed process**

Yutaka Yoshida<sup>1</sup>, Yusuke Ichino<sup>1</sup>, Yuji Tsuchiya<sup>1</sup>, Ataru Ichinose<sup>2</sup>, Kaname Matsumoto<sup>3</sup>, Satoshi Awaji<sup>4</sup>

<sup>1</sup>Nagoya university, Japan

<sup>2</sup>Central Research Institute of Electric Power Industry, Japan

<sup>3</sup>Kyushu Institute of Technology, Japan

<sup>4</sup>Tohoku University, Japan

**3-MP-CC3-S03****Mechanical properties and critical current on cryogenic temperature in REBCO tape**Mingzhi Guan<sup>1</sup><sup>1</sup>Institute of Modern Physics, Chinese Academy of Sciences, China**3-MP-CC3-S04****Nonmagnetic Ni-9at%W RABITS for Coated Conductor Technology**Mark Rikell<sup>1</sup>, Oliver Brunkahl<sup>1</sup>, Jan Kunert<sup>1</sup>, Michael Bäcker<sup>1</sup><sup>1</sup>Deutsche Nanoschicht GmbH, Germany**3-MP-CC3-S05****Study on the electrical performance improvement of the REBCO coated conductor**Ho Ik Du<sup>1</sup>, Sung Chae Yang<sup>1</sup>, Hyun Gi Jeong<sup>1</sup><sup>1</sup>Chonbuk National University, South Korea**3-MP-CC3-S06****Reel-to-reel laser striated (RE)BCO strands for long length Roebel cables**Rainer Nast<sup>1</sup>, Andrea Kling<sup>1</sup>, Bernd Ringsdorf<sup>1</sup>, Alexandra Jung<sup>1</sup>, Francesco Grilli<sup>1</sup><sup>1</sup>Karlsruhe Institute of Technology (KIT), Institute for Technical Physics, Germany**3-MP-CC3-S07****Thermal cycling of overlap joints of CC tapes**Michal Skarba<sup>1</sup>, Marcela Pekaríková<sup>2</sup>, Eva Cuninková<sup>2</sup>, Jozef Mišík<sup>2</sup>, Martin Nečpal<sup>2</sup>, Lubomír Frolek<sup>3</sup>, Fedor Gömöry<sup>3</sup><sup>1</sup>Slovak University of Technology in Bratislava, Faculty of Materials Science and Technology in Trnava, Slovak Academy of Sciences, Institute of Electrical Engineering, Slovakia<sup>2</sup>Slovak University of Technology in Bratislava, Faculty of Materials Science and Technology in Trnava, Slovakia<sup>3</sup>Slovak Academy of Sciences, Institute of Electrical Engineering, Slovakia**3-MP-CC3-S08****Current Distribution Analysis for REBCO/Conductive Oxides/Cu Coated Conductor**Seiya Inoue<sup>1</sup>, Tsuyoshi Hamada<sup>1</sup>, Shigeru Horii<sup>1</sup>, Toshiya Doi<sup>1</sup><sup>1</sup>Kyoto University, Japan**3-MP-CC3-S09****(Sr,La)TiO<sub>3</sub> as a Conductive Buffer layer for Low-cost Coated Conductors**Tsuyoshi Hamada<sup>1</sup>, Keisuke Ota<sup>1</sup>, Seiya Inoue<sup>1</sup>, Shigeru Horii<sup>1</sup>, Ataru Ichinose<sup>2</sup>, Toshiya Doi<sup>1</sup><sup>1</sup>Kyoto University, Japan<sup>2</sup>Central Research Institute of Electric Power Industry, Japan**3-MP-CC3-S10****Development of a Normal Zone Propagation Set-up for YBCO Superconducting Tape**Huang Chen<sup>1</sup>, Huajun Liu<sup>2</sup>, Fang Liu<sup>2</sup>, Chao Zhou<sup>3</sup>, Chao Dai<sup>2</sup><sup>1</sup>Institute of Plasma Physics Chinese Academy of Sciences, University of Science and Technology of China, China<sup>2</sup>Institute of Plasma Physics Chinese Academy of Sciences, China<sup>3</sup>University of Science and Technology of China, China

**3-MP-CC3-S11****Low temperature bonding of non-stabilized coated conductor tapes**

Edita Mikulášová<sup>1</sup>, Michaela Sojková<sup>1</sup>, Marcela Pekarčíková<sup>2</sup>, Michal Vojenčík<sup>1</sup>, Fedor Gömöry<sup>1</sup>

<sup>1</sup>IEE SAS, Slovakia

<sup>2</sup>MTF STU, Slovakia

**3-MP-CC3-S13****Critical current anisotropy in YBCO thin films grown on IBAD-MgO based templates**

Mukarram Zaman Khan<sup>1</sup>, Elmeri Rivasto<sup>1</sup>, Yue Zhao<sup>2</sup>, Chunsheng Chen<sup>3</sup>, Jiamin Zhu<sup>3</sup>, Jussi Tikanen<sup>4</sup>, Heikki Palonen<sup>4</sup>, Hannu Huhtinen<sup>5</sup>, Petriina Paturi<sup>4</sup>

<sup>1</sup>Wihuri Physical Laboratory, Department of Physics and Astronomy, University of Turku, University of Turku Graduate School (UTUGS), University of Turku, Finland

<sup>2</sup>Department of Electrical Engineering, Shanghai Jiao Tong University, China

<sup>3</sup>Shanghai Superconductor Technology Co. Ltd., China

<sup>4</sup>Wihuri Physical Laboratory, Department of Physics and Astronomy, University of Turku, Finland

<sup>5</sup>University of Turku, Finland

**3-MP-FM - Fe-based Materials**

Chairs: Tsuyoshi Tamegai, The University of Tokyo and Ruben Hühne, IFW Dresden

**3-MP-FM-I01****Substrate effect on the growth of SmFeAs(O F) films by CVD and arsenic diffusion**

Uriel Mérida-Toledo<sup>1</sup>, Nancy Castillo<sup>1</sup>, Agustín Conde-Gallardo<sup>1</sup>

<sup>1</sup>Physics Department, CINVESTAV-IPN, Mexico

**3-MP-FM-I02****Synthesis of Ba122 thick films by vapor diffusion method**

Toshiki Uemura<sup>1</sup>, Akiyasu Yamamoto<sup>1</sup>

<sup>1</sup>Tokyo University of Agriculture and Technology, Japan

**3-MP-FM-I04****Effect of annealing on structure and superconducting properties in Fe(Se,Te)**

Andrea Masi<sup>1</sup>, Carlo Alvani<sup>2</sup>, Achille Angrisani Armenio<sup>2</sup>, Andrea Augieri<sup>2</sup>, Giuseppe Celentano<sup>2</sup>, Gianluca De Marzi<sup>2</sup>, Chiarasole Fiamozzi Zignani<sup>2</sup>, Fabio Fabbri<sup>2</sup>, Aurelio La Barbera<sup>2</sup>, Franco Padella<sup>2</sup>, Francesco Rizzo<sup>2</sup>, Enrico Silva<sup>1</sup>, Angelo Vannozzi<sup>2</sup>

<sup>1</sup>Università degli Studi Roma Tre, Italy

<sup>2</sup>ENEA, Italy

**3-MP-FM-I05****Vortex phase transition and pinning in EuRbFe4As4 superconductor.**

Vladimir Vlasenko<sup>1</sup>, Pervakov Kirill<sup>1</sup>, Sergei Gavrilkin<sup>1</sup>

<sup>1</sup>P.N. Lebedev Physical Institute of the Russian Academy of Sciences, Russia

**3-MP-FM-S06****Tc homogeneity and vortex dynamics in K-doped FeAs122 superconducting tapes**Chiheng Dong<sup>1</sup>, Chao Yao<sup>1</sup>, He Huang<sup>1</sup>, Yanwei Ma<sup>1</sup><sup>1</sup>Institute of Electrical Engineering, Chinese Academy of Sciences, China**3-MP-FM-S07****Superconducting Joint between (Ba,K)Fe2As2 Tapes fabricated by a simple method**Shota Imai<sup>1</sup>, Shigeyuki Ishida<sup>2</sup>, Yoshinori Tsuchiya<sup>2</sup>, Akira Iyo<sup>2</sup>, Hiroshi Eisaki<sup>2</sup>, Taichiro Nishio<sup>1</sup>, Yoshiyuki Yoshida<sup>2</sup><sup>1</sup>Tokyo University of Science, Japan<sup>2</sup>National Institute of Advanced Industrial Science and Technology (AIST), Japan**3-MP-FM-S08****High pressure treatment of Fe-122 and Fe-1144 wire cores – phase stability**Andrzej Morawski<sup>1</sup>, Tomasz Cetner<sup>1</sup>, Shiv J. Singh<sup>2</sup>, Daniel Gajda<sup>3</sup>, Andrzej Zaleski<sup>3</sup>, Ryszard Diduszko<sup>4</sup>, Matt Rindfleisch<sup>5</sup>, Grzegorz Gajda<sup>6</sup>, Krzysztof Filar<sup>6</sup>, Piotr Przystupski<sup>7</sup><sup>1</sup>Institute of High Pressure Physics PAS, Poland<sup>2</sup>Clarendon Lab, University of Oxford, United Kingdom<sup>3</sup>Institute of Low Temperatures and Structural Research PAS, Poland<sup>4</sup>Institute of Tele- and Radiotechnics PAS, Poland<sup>5</sup>Hyper Tech Research Inc., United States of America<sup>6</sup>Frako-Term, Poland<sup>7</sup>Institute of Physics PAS, Poland**3-MP-FM-S9****Fabrication of Cu/Ag-Sheathed Ba0.6K0.4Fe2As2 Tapes and Wires via HIP method**Shifa Liu<sup>1</sup>, Chao Yao<sup>1</sup>, Chiheng Dong<sup>1</sup>, Zhe Cheng<sup>1</sup>, Yanwei Ma<sup>1</sup><sup>1</sup>Key Laboratory of Applied Superconductivity, Institute of Electrical Engineering, Chinese Academy of Sciences, China**3-MP-FM-S10****Pulsed laser deposition of Ba(Fe0.92Co0.08)2As2 nanocomposite films**Sven Meyer<sup>1</sup>, Marco Langer<sup>2</sup>, Jens Hänisch<sup>1</sup>, Bernhard Holzapfel<sup>1</sup><sup>1</sup>KIT - ITEP, Germany**3-MP-FM-S11****Enhanced Jc in BaZrO3 nanoparticles doped BaFe2(As0.66P0.33)2 films**Takumu Harada<sup>1</sup>, Go Tsuchiya<sup>1</sup>, Masashi Miura<sup>1</sup>, Keiichi Tanabe<sup>2</sup>, Masaru Kiuchi<sup>3</sup>, Teruo Matsushita<sup>3</sup><sup>1</sup>Seikei University, Japan<sup>2</sup>Superconductivity Sensing Technology Research Association, Japan<sup>3</sup>Kyushu Institute of Technology, Japan**3-MP-FM-S12****Ba(Fe1-xCox)2As2 thin films on vicinal CaF2**Marco Langer<sup>1</sup>, Sven Meyer<sup>1</sup>, Jens Hänisch<sup>1</sup>, Bernhard Holzapfel<sup>1</sup><sup>1</sup>Karlsruhe Institute of Technology (KIT), Germany

**3-MP-FM-S13****Compositional Influences on Intergrain Connectivity in K-Doped BaFe<sub>2</sub>As<sub>2</sub> Bulks**

Chongin Pak<sup>1</sup>, Yi-Feng Su<sup>1</sup>, Yesusa Collantes<sup>1</sup>, Chiara Tarantini<sup>1</sup>, Eric Hellstrom<sup>2</sup>, David Larbalestier<sup>2</sup>, Fumitake Kametani<sup>2</sup>

<sup>1</sup>Applied Superconductivity Center, National High Magnetic Field Laboratory, Florida State University, United States of America

<sup>2</sup>Applied Superconductivity Center, National High Magnetic Field Laboratory, Department of Mechanical Engineering, Florida State University, United States of America

**3-MP-FM-S14****Synthesis of polycrystalline superconducting Ba<sub>0.5</sub>K<sub>0.5</sub>Fe<sub>2</sub>As<sub>2</sub> and FeSe<sub>0.5</sub>Te<sub>0.5</sub>**

Alessia Provino<sup>1</sup>, Cristina Bernini<sup>1</sup>, Giulia Sylva<sup>2</sup>, Valeria Braccini<sup>1</sup>, Marina Putti<sup>2</sup>, Andrea Malagoli<sup>1</sup>, Pietro Manfrinetti<sup>3</sup>, Amalia Ballarino<sup>4</sup>, Simon C. Hopkins<sup>4</sup>

<sup>1</sup>Institute SPIN-CNR, Italy

<sup>2</sup>Department of Physics, University of Genova, Italy

<sup>3</sup>Department of Chemistry, University of Genova, Italy

<sup>4</sup>CERN, Switzerland

**3-MP-FM-S15****Synthesis of the hole-doped superconductor Ba<sub>1-x</sub>K<sub>x</sub>Fe<sub>2</sub>As<sub>2</sub> by mechanical alloying**

Kirill Pervakov<sup>1</sup>, Vladimir Vlasenko<sup>1</sup>, Eugeny Maltsev<sup>1</sup>

<sup>1</sup>P.N. Lebedev Physical Institute of the Russian Academy of Sciences, Russia

**3-MP-FM-S16****Superconducting state in (La,Na,K)Fe<sub>2</sub>As<sub>2</sub> and (La,Na)AFe<sub>4</sub>As<sub>4</sub> (A=Rb,Cs)**

Kenji Kawashima<sup>1</sup>, Shigeyuki Ishida<sup>2</sup>, Hiroshi Fujihisa<sup>2</sup>, Yoshito Gotoh<sup>2</sup>, Hiraku Ogino<sup>2</sup>, Hiroshi Eisaki<sup>2</sup>, Yoshiyuki Yoshida<sup>2</sup>, Akira Iyo<sup>2</sup>

<sup>1</sup>IMRA Material R&D Co., Ltd., AIST, Japan

<sup>2</sup>AIST, Japan

**3-MP-FM-S17****Study of Fe(Se,Te) film growth on different substrates**

Antonella Mancini<sup>1</sup>, Andrea Masi<sup>2</sup>, Achille Angrisani Armenio<sup>1</sup>, Alessandro Rufoloni<sup>1</sup>, Andrea Augieri<sup>1</sup>, Angelo Vannozi<sup>1</sup>, Valentina Pinto<sup>1</sup>, Laura Piperno<sup>2</sup>, Francesco Rizzo<sup>1</sup>, Fabio Fabbri<sup>1</sup>, Giuseppe Celentano<sup>1</sup>, Aurelio La Barbera<sup>1</sup>, Franco Padella<sup>1</sup>

<sup>1</sup>ENEA Frascati Research Centre, Italy

<sup>2</sup>Roma Tre University, Engineering Department, Italy

**3-MP-FM-S18****Uniaxial strain experiments on Tellurium doped Iron selenides**

Aleena Anna Thomas<sup>1</sup>, Thomas Doert<sup>2</sup>, Cornelius Nielsch<sup>1</sup>, Ruben Hühne<sup>3</sup>

<sup>1</sup>Leibniz Institute for Solid State and Materials Research, Technical University, Dresden, Germany

<sup>2</sup>Technical University, Dresden, Germany

<sup>3</sup>Leibniz Institute for Solid State and Materials Research, Dresden, Germany

**3-MP-FM-S19****Universal phase diagram of FeSe<sub>1-x</sub>Tex via annealing in different atmospheres**

David Uhrig<sup>1</sup>, Grant Williams<sup>2</sup>, Gabriel Bielecki<sup>1</sup>, Shen Chong<sup>3</sup>

<sup>1</sup>Robinson Research Institute, Victoria University of Wellington, School of Chemical and Physical Sciences, Victoria University of Wellington, MacDiarmid Institute for Advanced Materials and Nanotechnology, Victoria University of Wellington, New Zealand

<sup>2</sup>School of Chemical and Physical Sciences, Victoria University of Wellington, MacDiarmid Institute for Advanced Materials and Nanotechnology, Victoria University of Wellington, New Zealand

<sup>3</sup>Robinson Research Institute, Victoria University of Wellington, MacDiarmid Institute for Advanced Materials and Nanotechnology, Victoria University of Wellington, New Zealand

**3-MP-FM-S20****Boosting Superconducting Properties of Fe(Se, Te) by Fluorine Doping**

Feng Jianqing<sup>1</sup>, Liu Jixing<sup>2</sup>, Zhang Shengnan<sup>1</sup>, Li Chengshan<sup>1</sup>, Wang Xiaolin<sup>2</sup>

<sup>1</sup>Northwest Institute for Nonferrous Metal Research, China

<sup>2</sup>University of Wollongong, China

**3-MP-FM-S21****Oriented buffer layers by CSD for epitaxial Fe(Se,Te) film growth**

Angelo Vannoni<sup>1</sup>, Andrea Augieri<sup>1</sup>, Giulia Sylva<sup>2</sup>, Valeria Braccini<sup>2</sup>, Alessandro Rufoloni<sup>1</sup>, Valentina Pinto<sup>1</sup>, Antonella Mancini<sup>1</sup>, Andrea Masi<sup>3</sup>, Achille Angrisani Armenio<sup>1</sup>, Laura Piperno<sup>3</sup>, Francesco Rizzo<sup>1</sup>, Giuseppe Celentano<sup>1</sup>

<sup>1</sup>ENEA Frascati Research Centre, Italy

<sup>2</sup>CNR-SPIN, Italy

<sup>3</sup>Roma Tre University, Italy

**3-MP-FM-S22****Microwave Impedance Study of Superconducting (Li<sub>1-x</sub>Fe<sub>x</sub>)OHFeSe Single Crystal**

Nickolay (Mykola) Cherpak<sup>1</sup>, Alexander Barannik<sup>1</sup>, Yun Wu<sup>2</sup>, Xueqiang Zhang<sup>2</sup>, Jia Wang<sup>2</sup>, Xiaoli Dong<sup>2</sup>, Liang Sun<sup>3</sup>, Yu-Sheng He<sup>2</sup>

<sup>1</sup>O. Usikov IRE NAS of Ukraine, Ukraine

<sup>2</sup>Beijing National Laboratory for Condensed Matter Physics, Institute of Physics, Chinese Academy of Sciences, China

<sup>3</sup>Songshan Lake Materials Laboratory, China

**3-MP-FM-S23****Enhanced critical current density in CaKFe4As4 superconducting tapes**

Zhe Cheng<sup>1</sup>, Chiheng Dong<sup>2</sup>, Shifa Liu<sup>1</sup>, He Huang<sup>1</sup>, Vitalii Vlasko-Vlasov<sup>4</sup>, Ulrich Welp<sup>4</sup>, Wai-Kwong Kwok<sup>3</sup>, Yanwei Ma<sup>1</sup>

<sup>1</sup>Key Laboratory of Applied Superconductivity, Institute of Electrical Engineering, Chinese Academy of Sciences, University of Chinese Academy of Science, China

<sup>2</sup>Key Laboratory of Applied Superconductivity, Institute of Electrical Engineering, Chinese Academy of Sciences, China

<sup>3</sup>Argonne National Laboratory, United States of America

**3-MP-FM-S24****Superconductivity dependence on the growth conditions in CaKFe4As4**

Shiv J. Singh<sup>1</sup>, Matthew Bristow<sup>1</sup>, Tomasz Cetner<sup>2</sup>, Andrzej Morawski<sup>2</sup>, Simon J. Clarke<sup>3</sup>, Stephen J. Blundell<sup>1</sup>, Amalia I. Coldea<sup>1</sup>

<sup>1</sup>Clarendon Laboratory, Department of Physics, University of Oxford, United Kingdom

<sup>2</sup>Institute of High Pressure Physics, Polish Academy of Science, Poland

<sup>3</sup>Department of Chemistry, University of Oxford, United Kingdom

**3-MP-FM-S25****Effect of oxygen contamination on densification of Fe(Se,Te)**

Francesca Varsano<sup>1</sup>, Andrea Masi<sup>2</sup>, Carlo Alvani<sup>1</sup>, Achille Angrisani Armenio<sup>1</sup>, Mariangela Bellusci<sup>1</sup>, Giuseppe Celentano<sup>1</sup>, Chiarasole Fiamozzi Zignani<sup>1</sup>, Fabio Fabbri<sup>1</sup>, Aurelio La Barbera<sup>1</sup>, Franco Padella<sup>1</sup>, Marzia Pentimalli<sup>1</sup>, Angelo Vannozi<sup>1</sup>

<sup>1</sup>ENEA Frascati Research Centre, Italy

<sup>2</sup>Università degli Studi di Roma Tre, Italy

**3-MP-FP5 - Critical Current and Flux Pinning 5**

Chairs: Enrico Silva, University Roma Tre and John Feighan, University of Cambridge

**3-MP-FP5-I01****Ion beam irradiation experiments on coated REBCO coated conductors**

William Iliffe<sup>1</sup>, Yatir Linden<sup>2</sup>, Greg Brittles<sup>3</sup>, Rod Bateman<sup>3</sup>, Robert Slade<sup>3</sup>, Nianhua Peng<sup>4</sup>, Roger Webb<sup>4</sup>, Chris Grovenor<sup>5</sup>, Susannah Speller<sup>1</sup>

<sup>1</sup>University of Oxford, United Kingdom

<sup>2</sup>Department of Materials, University of Oxford, United Kingdom

<sup>3</sup>Tokamak Energy, United Kingdom

<sup>4</sup>Surrey Ion Beam Centre, University of Surrey, United Kingdom

**3-MP-FP5-I02****Low temperature properties of Zn-doped  $\text{YBa}_2\text{Cu}_3\text{O}_{6+\delta}$  films**

Kai Ackermann<sup>1</sup>, Jens Hänsch<sup>1</sup>, Bernhard Holzapfel<sup>1</sup>

<sup>1</sup>Karlsruhe Institute of Technology (KIT), Germany

**3-MP-FP5-I03****Asymmetric Critical Currents in REBCO Films under In-plane Fields**

Yuji Tsuchiya<sup>1</sup>, Keisuke Suzuki<sup>2</sup>, Akihiro Tsuruta<sup>3</sup>, Woosuck Shin<sup>3</sup>, Yusuke Ichino<sup>2</sup>, Yutaka Yoshida<sup>2</sup>

<sup>1</sup>Nagoya University, National Institute of Advanced Industrial Science and Technology, Japan

<sup>2</sup>Nagoya University, Japan

<sup>3</sup>National Institute of Advanced Industrial Science and Technology, Japan

**3-MP-FP5-S04****Film thickness dependence of in-field  $J_c$  in  $(\text{Y},\text{Gd})\text{BaCuO} + \text{BaZrO}_3$  nanoparticle CCs**

Go Tsuchiya<sup>1</sup>, Junya Kawanami<sup>1</sup>, Masashi Miura<sup>1</sup>, Masaru Kiuchi<sup>2</sup>, Teruo Matsushita<sup>2</sup>

<sup>1</sup>Seikei University, Japan

<sup>2</sup>Kyushu Institute of Technology, Japan

**3-MP-FP5-S05****Pinning and Temperature Dependence of the Critical Current in YBCO Nanoparticles**

Samir Khene<sup>1</sup>

<sup>1</sup>Radiation Physics Laboratory, Physics Department, Badji Mokhtar University, Algeria

**3-MP-FP5-S06****Effect of Frenkel defects on superconducting properties of GdBCO tapes**

Raphael Unterrainer<sup>1</sup>, David X. Fischer<sup>1</sup>, Michael Eisterer<sup>1</sup>

<sup>1</sup>Atominstitut, TU Wien, Austria

**3-MP-FP5-S07****Improvement the Critical Current in the Magnetic Field of REBCO Coated Conductor**

Seog-Whan Kim<sup>1</sup>, Hyung-Wook Kim<sup>1</sup>, Young-Sik Jo<sup>1</sup>

<sup>1</sup>Korea Electrotechnology Research Institute, South Korea

**3-MP-FP5-S08****Critical current anisotropy of industrial coated conductors close to 77 K**

Eugen Seiler<sup>1</sup>, Fedor Gömöry<sup>1</sup>, Rastislav Ries<sup>1</sup>, Michal Vojenciak<sup>1</sup>

<sup>1</sup>Institute of Electrical Engineering SAS, Slovakia

**3-MP-FP5-S09****High frequency vortex dynamics in  $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$  with  $\text{Ba}_2\text{YTaO}_6$ - $\text{Ba}_2\text{YNbO}_6$  nanodefects**

Kostiantyn Torokhtii<sup>1</sup>, Andrea Alimenti<sup>1</sup>, Francesco Rizzo<sup>2</sup>, Andrea Augieri<sup>2</sup>, Giuseppe Celentano<sup>2</sup>, Anna Frolova<sup>1</sup>, Enrico Silva<sup>1</sup>, Nicola Pompeo<sup>1</sup>

<sup>1</sup>Dipartimento di Ingegneria, Università Roma Tre, Italy

<sup>2</sup>ENEA Frascati Research Center, Italy

**3-MP-FP5-S10****Switching processes in 2G HTS tape under magnetic field and short current pulses**

Sergei Pokrovskii<sup>1</sup>, Irina Anischenko<sup>1</sup>, Dmitriy Abin<sup>1</sup>, Maksim Osipov<sup>1</sup>, Igor Rudnev<sup>1</sup>

<sup>1</sup>National Research Nuclear University MEPhI, Russia

**3-MP-FP5-S12****Pinning Properties of Substrate Decorated YBCO Films**

Achille Angrisani Armenio<sup>1</sup>, Laura Piperno<sup>2</sup>, Gianluca De Marzi<sup>1</sup>, Valentina Pinto<sup>1</sup>, Antonella Mancini<sup>1</sup>, Francesco Rizzo<sup>1</sup>, Angelo Vannozzi<sup>1</sup>, Alessandro Rufoloni<sup>1</sup>, Andrea Augieri<sup>1</sup>, Ramona B Mos<sup>3</sup>, Lelia Ciontea<sup>3</sup>, Traian Petrisor<sup>3</sup>, Traian Jr petrisor<sup>3</sup>, Giovanni Sotgiu<sup>2</sup>, Giuseppe Celentano<sup>1</sup>

<sup>1</sup>ENEA Frascati Research Centre, Italy

<sup>2</sup>Engineering Department, Roma Tre University, Italy

<sup>3</sup>Centre for Superconductivity, Spintronics and Surface Science, Technical University of Cluj-Napoca, Romania

**3-MP-FP5-S14****Influence of CORC Cable Winding Mode on Its critical current and AC loss.**

Tengteng Li<sup>1</sup>

<sup>1</sup>Southwest Jiaotong University, China

**3-MP-FP5-S15****Effect of non-uniform proton irradiation on the critical current of REBCO tapes**

Haruumi Yamamoto<sup>1</sup>, Satoshi Ito<sup>1</sup>, Misako Miwa<sup>1</sup>, Shigeo Matsuyama<sup>1</sup>, Hidetoshi Hashizume<sup>1</sup>

<sup>1</sup>Department of Quantum Science and Energy Engineering, Graduate School of Engineering, Tohoku University, Japan

**3-MP-FP5-S16****Measurement of Jc inhomogeneity in High-Temperature Superconducting (HTS) bulks**

Bruno Douine<sup>1</sup>, Mohamed Elbaa<sup>1</sup>, Kévin Berger<sup>1</sup>

<sup>1</sup>GREEN - Université de Lorraine, France

**3-MP-MD - Novel and Device Materials**

Chairs: Gianluca Ghigo, Politecnico di Torino and Soshi Iimura, Tokyo Institute of Technology

**3-MP-MD-I01****Fluctuations and Glassy Superconductivity in Granular Boron Doped Diamond**

Georgina Klemencic<sup>1</sup>, Jonathan Fellows<sup>2</sup>, Jessica Werrell<sup>1</sup>, Soumen Mandal<sup>1</sup>, Sean Giblin<sup>1</sup>, Robert Smith<sup>3</sup>, Oliver Williams<sup>1</sup>

<sup>1</sup>Cardiff University, United Kingdom

<sup>2</sup>University of Bristol, United Kingdom

<sup>3</sup>University of Birmingham, United Kingdom

**3-MP-MD-I02****Application of metamaterial nano-engineering for increasing Tc**

Michael Osofsky<sup>1</sup>, Vera Smolyaninova<sup>2</sup>, Joseph Prestigiacomo<sup>1</sup>, Peter Rosen<sup>3</sup>, Matthew Dickson<sup>3</sup>, Brian Woodfield<sup>3</sup>, Jeffrey Lynn<sup>4</sup>, Nicholas Butch<sup>4</sup>, Heather Chen-Mayer<sup>4</sup>, Igor Smolyaninov<sup>5</sup>

<sup>1</sup>Naval Research Laboratory, United States of America

<sup>2</sup>Towson University, United States of America

<sup>3</sup>Chemistry and Biochemistry Dept., Brigham Young University, United States of America

<sup>4</sup>NIST Center for Neutron Research, National Institute of Standards and Technology, United States of America

<sup>5</sup>Department of Electrical and Computer Engineering, University of Maryland, United States of America

**3-MP-MD-S03****Discovery of 5 new superconductors using materials informatics**

Yoshihiko Takano<sup>1</sup>, Ryo Matsumoto<sup>1</sup>

<sup>1</sup>National Institute for Materials Science (NIMS), Japan

**3-MP-MD-S04****Performance of High Tc dc SQUIDS Based On Step-edge Josephson Junctions**

Zhu Ziqing<sup>1</sup>

<sup>1</sup>Peking University, State Key Laboratory For Artificial Microstructure and Mesoscopic Physics, China

### **3-MP-MD-S05**

**Influence of substrate type on superconducting properties of NbN thin films**

Maros Gregor<sup>1</sup>, Serhii Volkov<sup>1</sup>, Tomas Roch<sup>1</sup>, Andrej Plecenik<sup>1</sup>

<sup>1</sup>Comenius University, Faculty of Mathematics, Physics and Informatics, Slovakia

### **3-MP-MD-S06**

**Microwave Optimization of Connector Transitions For Superconducting Cables**

Vaibhav Gupta<sup>1</sup>, Bhargav Yelamanchili<sup>1</sup>, Simin Zou<sup>1</sup>, Tamara Isaacs-smith<sup>1</sup>, John Sellers<sup>1</sup>, David Tuckerman<sup>2</sup>, Michael Hamilton<sup>1</sup>

<sup>1</sup>Auburn University, United States of America

<sup>2</sup>Microsoft Research, United States of America

### **3-MP-MD-S07**

**Transition Temperature and Localization in nano-sized dirty superconductors**

Masaki Umeda<sup>1</sup>, Masaru Kato<sup>2</sup>

<sup>1</sup>Department of Mathematical Sciences, Osaka Prefecture University, Japan

<sup>2</sup>Department of Mathematical Sciences, Osaka Prefecture University, Department of Physics and Electronics, Osaka Prefecture University, Japan

### **3-MP-MD-S08**

**Superconductive Nb Nanostripes by Block Copolymer Self-Assembly**

Natascia De Leo<sup>1</sup>, Matteo Fretto<sup>1</sup>, Federico Ferrarese Lupi<sup>1</sup>, Irdi Murataj<sup>1</sup>, Luca Boarino<sup>1</sup>

<sup>1</sup>INRIM, Italy

### **3-MP-MD-I09**

**Interplay between microstructure and performance of YBCO Josephson junctions**

Fabio Isa<sup>1</sup>, Wendy Purches<sup>1</sup>, Jeina Lazar<sup>1</sup>, Simon Lam<sup>1</sup>, Avi Bendavid<sup>1</sup>, Phil Martin<sup>1</sup>, Cathy Foley<sup>1</sup>, Emma Mitchell<sup>1</sup>

<sup>1</sup>CSIRO Manufacturing, Australia

## **3-MP-MG - MgB2**

Chairs: Marco Bonura, University of Geneva and Gianmarco Bovone, SPIN Institute - CNR

### **3-MP-MG-I01**

**Lightweight MgB2 wires, cables and coils for mass limited applications**

Pavol Kováč<sup>1</sup>

<sup>1</sup>Institute of Electrical Engineering of Slovak Academy of Sciences, Slovakia

**3-MP-MG-I02****Magnetic shielding by machinable MgB2 and superimposed MgB2/Fe hollow cylinders**

Laura Gozzelino<sup>1</sup>, Roberto Gerbaldo<sup>1</sup>, Gianluca Ghigo<sup>1</sup>, Francesco Laviano<sup>1</sup>, Daniele Torsello<sup>1</sup>, Valentina Bonino<sup>2</sup>, Marco Truccato<sup>2</sup>, Dan Batalu<sup>3</sup>, Mihai Grigorescu<sup>4</sup>, Mihail Burdusel<sup>5</sup>, Gheorghe Aldica<sup>5</sup>, Petre Badica<sup>5</sup>

<sup>1</sup>Politecnico di Torino, Department of Applied Science and Technology, Istituto Nazionale di Fisica Nucleare, Italy

<sup>2</sup>Department of Physics, University of Torino, Istituto Nazionale di Fisica Nucleare, Italy

<sup>3</sup>University Politehnica of Bucharest, Romania

<sup>4</sup>University Politehnica of Bucharest, National Institute of Materials Physics, Romania

<sup>5</sup>National Institute of Materials Physics, Romania

**3-MP-MG-S03****Nb sheathed MgB2 superconducting tape with addition of VB2**

Lucas Barboza Sarno da Silva<sup>1</sup>, Lucas de Alencar Andreotti<sup>1</sup>, Durval Rodrigues Jr<sup>1</sup>

<sup>1</sup>Escola de Engenharia de Lorena - Universidade de São Paulo, Brazil

**3-MP-MG-S04****The critical current properties of multifilament MgB2 wires by IMD process**

Fang Yang<sup>1</sup>, Xiaomei Xioong<sup>1</sup>, Qingyang Wang<sup>1</sup>, Jianqing Feng<sup>1</sup>, Chengshan Li<sup>1</sup>

<sup>1</sup>Northwest Institute for Nonferrous Metal Research, China

**3-MP-MG-S05****Perspectives for large scale high pressure MgB2 and Fe-based wire production**

Tomasz Cetner<sup>1</sup>, Andrzej Morawski<sup>1</sup>, Wolfgang Häßler<sup>2</sup>, Maurizio Vignolo<sup>3</sup>, Gianmarco Bovone<sup>3</sup>, Marco Capra<sup>3</sup>, Daniel Gajda<sup>4</sup>, Andrzej Zaleski<sup>4</sup>, Grzegorz Gajda<sup>5</sup>, Krzysztof Filar<sup>5</sup>, Ryszard Diduszko<sup>6</sup>, Piotr Przystupski<sup>7</sup>

<sup>1</sup>Institute of High Pressure Physics PAS, Syria

<sup>2</sup>Leibniz-Institute for Solid State and Materials Research Dresden, Germany

<sup>3</sup>SPIN CNR, Italy

<sup>4</sup>Institute of Low Temperatures and Structural Research PAS, Poland

<sup>5</sup>Frako-Term, Poland

<sup>6</sup>Institute of Tele- and Radiotechnics PAS, Poland

<sup>7</sup>Institute of Physics PAS, Poland

WEDNESDAY

**3-MP-MG-S06****Research activities of MgB2 wires and tapes within the EASITRAIN project**

Mattia Donato<sup>1</sup>, Matteo Tropeano<sup>1</sup>, Daniele Magrassi<sup>1</sup>, Tumino Andrea<sup>1</sup>, Davide Pietranera<sup>1</sup>

<sup>1</sup>ASG Superconductors Spa, Italy

**3-MP-MG-S08****Development of km-grade MgB2 superconducting wires at Sam Dong Co., Ltd.**

Jun Hyuk Choi<sup>1</sup>, Dong Gun Lee<sup>1</sup>, Gi Yeong Yoon<sup>1</sup>, Ju Heum Jeon<sup>1</sup>, Minoru Maeda<sup>2</sup>, Seyong Choi<sup>2</sup>, Jung Ho Kim<sup>3</sup>

<sup>1</sup>Sam Dong Co., Ltd., South Korea

<sup>2</sup>Kangwon National University, Japan

<sup>3</sup>University of Wollongong, Australia

**3-MP-MG-S09****Heat treatment influence on microstructure and properties of MgB<sub>2</sub> superconductor**Anastasiia Tsapleva<sup>1</sup>, Ildar Abdyukhanov<sup>1</sup>, Maxim Alekseev<sup>1</sup>, Pavel Konovalov<sup>1</sup>, Elena Kotova<sup>1</sup><sup>1</sup>A. A. Bochvar's All-Russian Scientific Research Institute of Inorganic Materials (VNIIIM), Russia**3-MP-MG-S10****Post-annealing Effect on MgB<sub>2</sub> Thin Films with Evaporation Protective Layer**Naoya Kitamura<sup>1</sup>, Junya Demise<sup>1</sup>, Shigeru Horii<sup>1</sup>, Takumu Iwanaka<sup>2</sup>, Toshiaki Kusunoki<sup>2</sup>, Ataru Ichinose<sup>3</sup>, Toshiya Doi<sup>1</sup><sup>1</sup>Kyoto University, Japan<sup>2</sup>Research & Development Group, Hitachi Ltd., Japan<sup>3</sup>Central Research Institute of Electric Power Industry, Japan**3-MP-MG-S11****Current Transfer and Electrical Behavior of MgB<sub>2</sub>/Ta/Cu Superconducting Wire**Irshad Ahmad<sup>1</sup><sup>1</sup>Functional Ceramics Laboratory, Department of Applied Physics, Indian Institute of Technology (Indian School of Mines), India**3-MP-MG-S12****Evaluation characteristics of pancake coil composed of MgB<sub>2</sub> Rutherford cable**Taiki Onji<sup>1</sup>, Masaru Tomita<sup>1</sup>, Atsushi Ishihara<sup>1</sup>, Tsuyoshi Yagai<sup>2</sup>, Tomoaki Takao<sup>2</sup>, Yasuhiro Makida<sup>3</sup>, Takakazu Shintomi<sup>3</sup>, Makoto Tsuda<sup>4</sup>, Daisuke Miyagi<sup>4</sup>, Naoki Hirano<sup>5</sup>, Atsushi Shigemori<sup>6</sup>, Kentaro Nakajima<sup>6</sup>, Toshihiro Komagome<sup>7</sup>, Kenichi Tsukada<sup>7</sup>, Masayuki Hoshino<sup>7</sup>, Takataro Hamajima<sup>7</sup><sup>1</sup>Railway Technical Research Institute, Japan<sup>2</sup>Sophia University, Japan<sup>3</sup>KEK, Japan<sup>4</sup>Tohoku University, Japan<sup>5</sup>Chubu Electric Power Co., Inc., Japan<sup>6</sup>Iwatani Co., Japan<sup>7</sup>Mayekawa MFG Co. Ltd, Japan**3-MP-MG-S13****Enhancement of the MgB<sub>2</sub> by Ga/In acetylacetone additions obtained by SPS**Dan Batalu<sup>1</sup>, Gheorghe Aldica<sup>2</sup>, Mihail Burdusel<sup>2</sup>, Mihai Grigorescu<sup>2</sup>, Petre Badica<sup>2</sup><sup>1</sup>University Politehnica of Bucharest, Materials Science and Engineering Faculty, Romania<sup>2</sup>National Institute of Materials Physics, Romania**3-MP-MG-S14****Carbon doping in MgB<sub>2</sub> from proteins introduced into boron precursor**Marco Capra<sup>1</sup>, Gianmarco Bovone<sup>1</sup>, Cristina Bernini<sup>1</sup>, Federico Loria<sup>1</sup>, Marina Putti<sup>2</sup>, Carlo Ferdeghini<sup>1</sup>, Simon Hopkins<sup>3</sup>, Amalia Ballarino<sup>3</sup>, Maurizio Vignolo<sup>1</sup><sup>1</sup>SPIN-CNR Genoa, Italy<sup>2</sup>University of Genoa, Italy<sup>3</sup>CERN, Switzerland

**3-MP-MG-S15****Influence of milling energy of the precursor on the properties of Ti-doped MgB<sub>2</sub>**Wolfgang Häßler<sup>1</sup><sup>1</sup>Leibniz-Institute for Solid State and Materials Research (IFW) Dresden, Germany**3-MP-MG-S16****Critical current, minimum quench energy, normal zone propagation in MgB<sub>2</sub> barrel**Chris Dhulst<sup>1</sup>, Serdar Atamer<sup>2</sup>, Mehmet Kutukcu<sup>2</sup>, B.A. Glowacki<sup>3</sup>, Jan Mestdagh<sup>1</sup>, ArendNijhuis<sup>4</sup><sup>1</sup>NV Bekaert SA, Belgium<sup>2</sup>Epoch Wires Ltd, United Kingdom<sup>3</sup>Epoch Wires Ltd., Department of Materials Science and Metallurgy, University of Cambridge, United Kingdom<sup>4</sup>University of Twente, Faculty of Science & Technology, Foundation SuperACT, The Netherlands**3-MP-MG-S17****Sol-gel Derived Magnesium Diboride Thin Films on Silicon Carbide**Xinwei Cai<sup>1</sup>, Zhengshan Guo<sup>1</sup>, Chen Guo<sup>1</sup>, Yan Zhang<sup>1</sup>, Qingrong Feng<sup>1</sup>, Zizhao Gan<sup>1</sup><sup>1</sup>Peking University, School of Physics, Applied Superconductivity Research Center, China**3-MP-MO1 - Numerical Modelling 1**

Chairs: Antonio Morandi, University of Bologna and Mike Sumption, The Ohio State University, Materials Science Department

**3-MP-MO1-I01****H-formulation modelling of a high-T<sub>c</sub> superconducting dynamo.**Ratu Mataira<sup>1</sup>, Mark Ainslie<sup>2</sup>, Rod Badcock<sup>1</sup>, Chris Bumby<sup>1</sup><sup>1</sup>Robinson Research Institute, New Zealand<sup>2</sup>University of Cambridge, United Kingdom**3-MP-MO1-I02****Comparison of finite element formulations for HTS and ferromagnetic materials**Julien Dular<sup>1</sup>, Christophe Geuzaine<sup>1</sup>, Benoît Vanderheyden<sup>1</sup><sup>1</sup>Department of Electrical Engineering and Computer Science, University of Liège, Belgium**3-MP-MO1-S03****Performance study of Flux-coupled Superconducting Fault Current Limiter**Bin Xiang<sup>1</sup>, Jinkun Tu<sup>1</sup>, Ting Yu<sup>1</sup>, Yingsan Geng<sup>1</sup>, Zhiyuan Liu<sup>1</sup>, Jianhua Wang<sup>1</sup><sup>1</sup>XJTU, State Key Laboratory of Electrical Insulation and Power Equipment, China**3-MP-MO1-S04****Non-Bean-Like Critical States in Superconductors in Low Applied Fields**Andrew Smith<sup>1</sup>, Damian Hampshire<sup>2</sup>, Elizabeth Surrey<sup>3</sup><sup>1</sup>Durham University, Department of Physics, Superconductivity Group, United Kingdom<sup>2</sup>Superconductivity Group, Centre for Materials Physics, Durham University, United Kingdom<sup>3</sup>Culham Centre for Fusion Energy, Culham Science Centre, United Kingdom

### **3-MP-MO1-S05**

**Irreversible magnetization by Interaction between Meissner current and vortices**  
Sangjun Oh<sup>1</sup>

<sup>1</sup>National Fusion Research Institute, South Korea

### **3-MP-MO1-S06**

**Study of the AC loss of the Bi-2212 round wire using three different models**  
Wei Chen<sup>1</sup>

<sup>1</sup>Southwest Jiaotong University, China

### **3-MP-MO1-S07**

**Numerical Analysis of AC Loss in HTS Coated Conductors with Defect**  
Yong Chen<sup>1</sup>

<sup>1</sup>China

### **3-MP-MO1-S08**

**Thermomagnetic instability of a superconducting strip in oblique magnetic fields**  
Chenguang Huang<sup>1</sup>

<sup>1</sup>Northwestern Polytechnical University, China

### **3-MP-MO1-S09**

**Solution of 3D magnetization problems for superconducting film stacks**  
Vladimir Sokolovsky<sup>1</sup>, Leonid Prigozhin<sup>2</sup>

<sup>1</sup>Physics Department, Ben-Gurion University of the Negev, Israel

<sup>2</sup>J Blaustein Institutes for Desert Research, Ben-Gurion University of the Negev, Israel

### **3-MP-MO1-S10**

**A general form T-A formulation for large-scale HTS modelling**  
Felix Huber<sup>1</sup>, Min Zhang<sup>2</sup>, Weijia Yuan<sup>1</sup>

<sup>1</sup>University of Strathclyde, United Kingdom

<sup>2</sup>University of Strathclyde, United Kingdom and Shanghai Jiao tong University, China

### **3-MP-MO1-S11**

**AC losses computation in HTS coils in the frequency domain**  
Yazid Statra<sup>1</sup>, Hocine Menana<sup>1</sup>, Bruno Douine<sup>1</sup>

<sup>1</sup>GREEN - Université de Lorraine, France

1530-1615 Refreshments &amp; Exhibition

HALLS 1 &amp; 2

## Oral Session 6

1615-1815

1615-1815 **3-LO-HL - High Field LTS**

ROOM: CLYDE AUDITORIUM

Chairs: Arno Godeke, Varian Medical Systems  
 Particle Therapy GmbH and Seung Yong Hahn, Seoul National University

1615

**3-LO-HL-011****High Magnetic Field NMR Superconducting Magnet Technology**Quliang Wang<sup>1</sup>, Jianhua Liu<sup>1</sup>, Yaohui Wang<sup>1</sup>, Lei Wang<sup>1</sup>, Yinming Dai<sup>1</sup><sup>1</sup>Institute of Electrical Engineering, Chinese Academy of Sciences, China

1645

**3-LO-HL-021****Superconductivity and High Magnetic Field Facilities**Charles Simon<sup>1</sup><sup>1</sup>LNCMI CNRS, France

1715

**3-LO-HL-031****Development of High Field, Wide Bore Superconducting Magnets beyond 18 Tesla**Wenbin Ma<sup>1</sup>, Timothy Hollis<sup>1</sup>, Daniel Strange<sup>1</sup>, Andrew Twin<sup>1</sup>, Roman Viznichenko<sup>1</sup>, David Warren<sup>1</sup><sup>1</sup>Oxford Instruments, United Kingdom

1745

**3-LO-HL-041****Development of a 27.2 T superconducting magnet at IEE**Jianhua Liu<sup>1</sup>, Quliang Wang<sup>1</sup>, Lei Wang<sup>1</sup>, Lang Qin<sup>1</sup>, Yaohui Wang<sup>1</sup><sup>1</sup>Institute of Electrical Engineering, Chinese Academy of Sciences, China1615-1815 **3-MO-FW - Fe-based Wires and Bulk**

ROOM: FORTH

Chairs: Valeria Braccini, CNR-SPIN and Kazumasa Iida, Nagoya University

1615

**3-MO-FW-011****Large Critical Current Density in HIP-processed (Ba,Na)Fe<sub>2</sub>As<sub>2</sub> Round Wire**Tsuyoshi Tamegai<sup>1</sup>, Daisuke Miyawaki<sup>2</sup>, Takahiro Suwa<sup>2</sup>, Sunseng Pyon<sup>2</sup>, Katsutoshi Takano<sup>3</sup>, Hideki Kajitani<sup>3</sup>, Norikiyo Koizumi<sup>3</sup>, Satoshi Awaji<sup>4</sup><sup>1</sup>The University of Tokyo, Japan<sup>2</sup>Department of Applied Physics, The University of Tokyo, Japan<sup>3</sup>Naka Fusion Institute, National Institutes for Quantum and Radiological Science and Technology, Japan<sup>4</sup>High Field Laboratory for Superconducting Materials, Institute for Materials Research, Tohoku University, Japan

1645	<b>Withdrawn</b>
1700	<b>3-MO-FW-03S</b> <b>Superconductivity at 48 K in heavily hydrogen-doped SmFeAsO epitaxial thin films</b> <u>Jumpei Matsumoto</u> <sup>1</sup> , Kota Hanzawa <sup>1</sup> , Masato Sasase <sup>2</sup> , Silvia Haindl <sup>3</sup> , Takayoshi Katase <sup>1</sup> , Hidenori Hiramatsu <sup>4</sup> , Hideo Hosono <sup>4</sup> <sup>1</sup> Laboratory for Materials and Structures, Tokyo Institute of Technology, Japan <sup>2</sup> Materials Research Center for Element Strategy, Tokyo Institute of Technology, Japan <sup>3</sup> World Research Hub Initiative (WRHI), Institute of Innovative Research, Tokyo Institute of Technology, Germany <sup>4</sup> Laboratory for Materials and Structures, Tokyo Institute of Technology, Materials Research Center for Element Strategy, Tokyo Institute of Technology, Japan
1715	<b>3-MO-FW-04S</b> <b>Unique defect structure and advantageous vortex pinning properties in CaKFe4As4</b> <u>Shigeyuki Ishida</u> <sup>1</sup> , Akira Iyo <sup>1</sup> , Hiraku Ogino <sup>1</sup> , Hiroshi Eisaki <sup>1</sup> , Nao Takeshita <sup>1</sup> , Kenji Kawashima <sup>2</sup> , Keiichi Yanagisawa <sup>3</sup> , Yuuga Kobayashi <sup>3</sup> , Koji Kimoto <sup>3</sup> , Hideki Abe <sup>3</sup> , Motoharu Imai <sup>3</sup> , Jun-ichi Shimoyama <sup>4</sup> , Michael Eisterer <sup>5</sup> <sup>1</sup> AIST, Japan <sup>2</sup> IMRA Materials R&D Co., Ltd., Japan <sup>3</sup> NIMS, Japan <sup>4</sup> Aoyama Gakuin University, Japan <sup>5</sup> TU Wien, Austria
1730	<b>3-MO-FW-05S</b> <b>Upper critical fields of the stoichiometric iron-based superconductor CaKFe4As4</b> <u>Matt Bristow</u> <sup>1</sup> , William Knafo <sup>2</sup> , Paul Canfield <sup>3</sup> , William Meier <sup>3</sup> , Stephen J Blundell <sup>1</sup> , Amalia Coldea <sup>1</sup> <sup>1</sup> University of Oxford, Clarendon Laboratory, United Kingdom <sup>2</sup> Laboratoire National des Champs Magnétiques Intenses (LNCMI), CNRS-UJF-UPS-INSA, France <sup>3</sup> Ames Laboratory, 311 Iowa State University, United States of America
1745	<b>3-MO-FW-06S</b> <b>Local magnetization of EuRb-1144: superconductivity and magnetic ordering</b> <u>Sigrid Holleis</u> <sup>1</sup> , Daniel Kagerbauer <sup>1</sup> , Shigeyuki Ishida <sup>2</sup> , Hiroshi Eisaki <sup>2</sup> , Akira Iyo <sup>2</sup> , Michael Eisterer <sup>1</sup> <sup>1</sup> Atominstitut, TU Wien, Austria <sup>2</sup> Electronics and Photonics Research Institute, National Institute of Advanced Industrial Science and Technology (AIST), Japan

1800

**3-MO-FW-07S****Hidden Antiferromagnetic Phase in Electron over-doped SmFeAsO**

Soshi Iimura<sup>1</sup>, Hiroshi Okanishi<sup>1</sup>, Satoru Matsuishi<sup>1</sup>, Haruhiro Hiraka<sup>2</sup>, Takashi Honda<sup>3</sup>, Kazutaka Ikeda<sup>3</sup>, Thomas Hansen<sup>4</sup>, Toshiya Otomo<sup>3</sup>, Hideo Hosono<sup>1</sup>

<sup>1</sup>Tokyo Institute of Technology, Japan

<sup>2</sup>Korea Atomic Energy Research Institute, South Korea

<sup>3</sup>High Energy Accelerator Research Organization, Japan

<sup>4</sup>Institut Laue-Langevin, France

**1615-1815 3-MO-CU - Cuprates**

ROOM: GALA

Chairs: Carlo Ferdeghini, Varian Medical Systems Particle

Therapy GmbH and Alev Aydiner, Karadeniz Technical University

1615

**3-MO-CU-011****Nanoengineered high temperature superconducting films with novel functionalities**

Anna Palau<sup>1</sup>, Alejandro Fernández-Rodríguez<sup>1</sup>, Jordi Alcalá<sup>1</sup>, Xavier Granados<sup>1</sup>, Xavier Obradors<sup>1</sup>, Teresa Puig<sup>1</sup>, Narcís Mestres<sup>1</sup>

<sup>1</sup>Institut de Ciència de Materials de Barcelona (ICMAB-CSIC), Spain

1645

**3-MO-CU-02S****On the versatility of growing REBCO films through transient liquids**

Juri Banchewski<sup>1</sup>, Laia Soler<sup>1</sup>, Julia Jareño<sup>1</sup>, Silvia Rasi<sup>2</sup>, Roger Guzman<sup>1</sup>, Natalia Chamorro<sup>3</sup>, Jordi Farjas<sup>2</sup>, Pere Roura<sup>2</sup>, Cristian Mocuta<sup>4</sup>, Susagna Ricart<sup>1</sup>, Xavier Obradors<sup>1</sup>, Teresa Puig<sup>1</sup>

<sup>1</sup>Institut de Ciència de Materials de Barcelona (ICMAB-CSIC), Spain

<sup>2</sup>Departament de Física, Universitat de Girona, Spain

<sup>3</sup>Departament de Química Inorgànica, Universitat Autònoma de Barcelona, Spain

<sup>4</sup>Synchrotron SOLEIL, L'Orme des Merisiers, France

1700

**3-MO-CU-03S****YBCO nanocomposite films prepared by fluorine-free polymer assisted deposition**

Mircea Nasui<sup>1</sup>, Traian Petrisor Jr.<sup>1</sup>, Ramona Bianca Mos<sup>1</sup>, Mihai Gabor<sup>1</sup>, Lelia Ciontea<sup>1</sup>, Traian Petrisor<sup>1</sup>

<sup>1</sup>Centre for Superconductivity, Spintronics and Surface Science, Technical University of Cluj-Napoca, Romania

1715

**3-MO-CU-04S****Ultrafast growth of YBCO films by low-pressure Transient Liquid Assisted Growth**

Silvia Rasi<sup>1</sup>, Laia Soler<sup>2</sup>, Julia Jareño<sup>2</sup>, Juri Banchewski<sup>2</sup>, Roger Guzman<sup>2</sup>, Jordi Farjas<sup>1</sup>, Pere Roura<sup>1</sup>, Cristian Mocuta<sup>3</sup>, Susagna Ricart<sup>2</sup>, Xavier Obradors<sup>2</sup>, Teresa Puig<sup>2</sup>

<sup>1</sup>University of Girona, Spain

<sup>2</sup>Institut de Ciència de Materials de Barcelona (ICMAB-CSIC), Spain

<sup>3</sup>Synchrotron SOLEIL, France

1730	<b>3-MO-CU-05S</b> <b>Correlations between the structure and superconducting properties of MT-YBaCuO</b> <u>Tetiana Prikhna</u> <sup>1</sup>	<sup>1</sup> Institute for Superhard Materials of the National Academy of Sciences of Ukraine, Ukraine
1745	<b>3-MO-CU-06S</b> <b>The effect of the addition of silver on the fracture of Y-Ba-Cu-O</b> <u>Jasmin Congreve</u> <sup>1</sup> , Yunhua Shi <sup>1</sup> , Anthony Dennis <sup>1</sup> , John H. Durrell <sup>1</sup> , David Cardwell <sup>1</sup>	<sup>1</sup> University of Cambridge, United Kingdom
1800	<b>3-MO-CU-07S</b> <b>Tl-1223 superconducting films, coatings and tapes: feasibility and perspectives</b> <u>Alessandro Leveratto</u> <sup>1</sup> , Aisha Saba <sup>1</sup> , Andrea Malagoli <sup>1</sup> , Ruggero Vaglio <sup>1</sup> , Marina Putti <sup>1</sup> , Carlo Ferdeghini <sup>1</sup> , Emilio Bellingeri <sup>1</sup> , Sigrid Holleis <sup>2</sup> , Michael Esterer <sup>2</sup> , Alice Moros <sup>3</sup> , Johannes Bernardi <sup>3</sup> , Patrick Krkotic <sup>4</sup> , Joffre Gutierrez Royo <sup>5</sup> , Teresa Puig <sup>5</sup> , Sergio Calatroni <sup>6</sup>	<sup>1</sup> CNR - SPIN, Italy <sup>2</sup> Atominstitut, TU Wien, Austria <sup>3</sup> USTEM, TU Wien, Austria <sup>4</sup> Cells ALBA, Spain <sup>5</sup> ICMAB-CSIC, Spain <sup>6</sup> CERN, Switzerland

1615-1815	<b>3-EO-TS - Topological Devices and Spintronics</b>	ROOM: CARRON
Chairs: Thilo Bauch, Chalmers University of Technology and Olivia Chen, Yokohama National University		
1615	<b>3-EO-TS-01I</b> <b>Coherent Semiconductor-Based Superconducting Quantum Circuits</b> <u>Karl Petersson</u> <sup>1</sup>	<sup>1</sup> Microsoft Quantum Lab - Copenhagen, Center for Quantum Devices, Niels Bohr Institute, University of Copenhagen, Denmark
1645	<b>3-EO-TS-02I</b> <b>Bi based topological Josephson junctions</b> <u>Alexander Brinkman</u> <sup>1</sup>	<sup>1</sup> University of Twente, The Netherlands

1715

**3-EO-TS-03S****MoRe/YBa<sub>2</sub>Cu<sub>3</sub>O<sub>7-x</sub> Josephson junctions and pi-loops**

M. I. Faley<sup>1</sup>, P. Reith<sup>2</sup>, D. C. Satrya<sup>2</sup>, V. S. Stolyarov<sup>3</sup>, A. A. Golubov<sup>4</sup>, H. Hilgenkamp<sup>2</sup>, R. E. Dunin-Borkowski<sup>5</sup>

<sup>1</sup>Peter Grünberg Institute, Germany

<sup>2</sup>Faculty of Science and Technology, MESA+ Institute for Nanotechnology, University of Twente, The Netherlands

<sup>3</sup>The Moscow Institute of Physics and Technology, Russia

<sup>4</sup>The Moscow Institute of Physics and Technology, Russia and Faculty of Science and Technology, MESA+ Institute for Nanotechnology, University of Twente, The Netherlands

<sup>5</sup>Peter Grünberg Institute, Ernst Ruska-Centre for Microscopy and Spectroscopy with Electrons, Forschungszentrum Jülich GmbH, Germany

1730

**3-EO-TS-04S****Low temperature characterization of spin filter Josephson junctions**

Roberta Caruso<sup>1</sup>, Davide Massarotti<sup>2</sup>, Gabriele Campagnano<sup>2</sup>, Avradeep Pal<sup>3</sup>, Halima Giovanna Ahmad<sup>4</sup>, Procolo Lucignano<sup>5</sup>, Matthias Eschrig<sup>6</sup>, Mark Blamire<sup>3</sup>, Francesco Tafuri<sup>7</sup>

<sup>1</sup>Dipartimento di Fisica "Ettore Pancini", Università degli Studi di Napoli Federico II, CNR-SPIN, Italy

<sup>2</sup>CNR-SPIN, Dipartimento di Ingegneria Elettrica e delle Tecnologie dell'Informazione, Università degli Studi di Napoli Federico II, Italy

<sup>3</sup>Department of Materials Science and Metallurgy, University of Cambridge, India

<sup>4</sup>Dipartimento di Fisica E. Pancini, Università degli Studi di Napoli Federico II, Monte S. Angelo, via Cinthia, I-80126 Napoli, Italy, CNR-SPIN, c/o complesso di Monte S. Angelo, via Cinthia, I-80126 Napoli, Italy, Italy

<sup>5</sup>CNR-SPIN, Italy

<sup>6</sup>Department of Physics, Royal Holloway, University of London, United Kingdom

<sup>7</sup>Dipartimento di Fisica E. Pancini, Università degli Studi di Napoli Federico II, CNR-SPIN, Italy

1745

**3-EO-TS-05S****Superconducting heterostructure with barrier with strong spin-orbit interaction**

Karen Constantinian<sup>1</sup>, Gennady Ovsyannikov<sup>1</sup>, Anton Shadrin<sup>2</sup>, Andrey Petrzhik<sup>1</sup>, Yulii Kislinski<sup>1</sup>, Georg Cristiani<sup>3</sup>, Gennady Logvenov<sup>3</sup>

<sup>1</sup>Kotel'nikov IRE RAS, Russia

<sup>2</sup>Kotel'nikov IRE RAS, Moscow Institute of Physics and Technology, Russia

<sup>3</sup>Max Planck Institute for Solid State Research, Germany

1800

**3-EO-TS-06S****Dissipative Effects on Step-edge junction arrays of various sizes**

Kyle Sundqvist<sup>1</sup>, Milton Torikachvili<sup>1</sup>, Michael O'Brien<sup>2</sup>, Shannon Kasa<sup>2</sup>, Marcio de Andrade<sup>2</sup>

<sup>1</sup>Department of Physics, San Diego State University, United States of America

<sup>2</sup>Naval Information Warfare Center Pacific, United States of America

ROOM: DOCHART

1615-1815 **3-EO-TM - Terahertz and Microwave Devices**

Chairs: Nobuyuki Yoshikawa, Yokohama National University and Maja Cassidy, Microsoft

1615

**3-EO-TM-01I**

**Integrated superconducting circuits for THz imaging spectroscopy**

Jochem Baselmans<sup>1</sup>, Akira Endo<sup>2</sup>, Stephen Yates<sup>3</sup>, Juan Bueno<sup>3</sup>, Pieter de Visser<sup>3</sup>, Vignesh Murugesan<sup>3</sup>, David Thoen<sup>2</sup>, Shahab Dabironezare<sup>2</sup>, Nuria Llombart<sup>2</sup>, Sebastian Hänle<sup>3</sup>, Alejandro Pascual Laguna<sup>2</sup>

<sup>1</sup>Delft University of Technology, SRON Netherlands Institute for Space Research, The Netherlands

<sup>2</sup>Delft University of Technology, The Netherlands

<sup>3</sup>SRON Netherlands Institute for Space Research, The Netherlands

1645

**3-EO-TM-02I**

**Non-linear superconducting silicon resonators**

Francesca Chiodi<sup>1</sup>, Pierre Bonnet<sup>1</sup>, Raphaëlle Delagrange<sup>1</sup>, Dominique Débarre<sup>1</sup>, Hélène le Sueur<sup>2</sup>

<sup>1</sup>Centre de Nanosciences et de Nanotechnologies - CNRS and Université Paris-Saclay, France

<sup>2</sup>Quantronics group, Service de Physique de l'Etat Condensée (CNRS URA 2464), France

1715

**3-EO-TM-03S**

**Titanium Nitride Microwave Kinetic Inductance Detectors for passive THz cameras**

Dmitry V. Morozov<sup>1</sup>, Simon M. Doyle<sup>2</sup>, Thomas L. R. Brien<sup>2</sup>, Archan Banerjee<sup>1</sup>, Dilini Hemakumara<sup>1</sup>, Iain G. Thayne<sup>1</sup>, Ken Wood<sup>3</sup>, Robert H. Hadfield<sup>1</sup>

<sup>1</sup>School of Engineering, University of Glasgow, United Kingdom

<sup>2</sup>School of Physics and Astronomy, Cardiff University, United Kingdom

<sup>3</sup>QMC Instruments, Cardiff, United Kingdom

1730

**3-EO-TM-04S**

**Compact superconducting terahertz emitters up to 2 THz**

Zaidong Qi<sup>1</sup>, Hancong Sun<sup>1</sup>, Huili Zhang<sup>1</sup>, Olcay Kizilaslan<sup>2</sup>, Wanghao Tian<sup>1</sup>, Zuyu Xu<sup>1</sup>, Tong Qing<sup>1</sup>, Xianjing Zhou<sup>1</sup>, Yangyang Lv<sup>1</sup>, Eric Dorsch<sup>2</sup>, Marc Ziegele<sup>2</sup>, Shigeyuki Ishida<sup>3</sup>, Hiroshi Eisaki<sup>3</sup>, Yoshiyuki Yoshida<sup>3</sup>, Valery Koshelets<sup>4</sup>, Dieter Koelle<sup>2</sup>, Reinhold Kleiner<sup>2</sup>, Huabing Wang<sup>1</sup>, Peiheng Wu<sup>1</sup>

<sup>1</sup>Rise, Nanjing University, China

<sup>2</sup>Physikalischs Institut and Center for Quantum Science in LISA+, Universitaet Tuebingen, Germany

<sup>3</sup>Electronics and Photonics Research Institute, Advanced Industrial Science and Technology, Japan

<sup>4</sup>Kotel'nikov Institute of Radio Engineering and Electronics, Russia

1745

**3-EO-TM-05S****High-Q superconducting microwave resonators using a single-crystal Nb film**Takashi Noguchi<sup>1</sup>, Agnes Dominion<sup>2</sup>, Matthias Kroug<sup>3</sup>, Satoru Mima<sup>4</sup>, Chiko Otani<sup>4</sup><sup>1</sup>RIKEN, NAOJ, Japan<sup>2</sup>University of Grenoble Alpes, France<sup>3</sup>NAOJ, Japan<sup>4</sup>RIKEN, Japan

1800

**3-EO-TM-06S****Design and characterization of Josephson Travelling-Wave Parametric Amplifiers**Ralf Dolata<sup>1</sup>, Ilya Golokolenov<sup>2</sup>, Andrew Guthrie<sup>3</sup>, Erik Jellyman<sup>3</sup>, Sergey Kafanov<sup>3</sup>, Christoph Kissling<sup>1</sup>, Marat Khabipov<sup>1</sup>, Yuri Pushkin<sup>3</sup>, Jonathan Prance<sup>3</sup>, Alexander Zorin<sup>1</sup><sup>1</sup>Physikalisch-Technische Bundesanstalt, Braunschweig and Berlin, Germany<sup>2</sup>Department of Physics, Lancaster University & National Research University HSE, Moscow, United Kingdom<sup>3</sup>Department of Physics, Lancaster University, United Kingdom**1615-1815 3-LO-TG - Transportation & Grid Technologies**

ROOM: M2 &amp; M3

Chairs: Weijia Yuan, University of Strathclyde and Lars Kuehn, Siemens

1615

**3-LO-TG-01I****Modular HTS bulk system for magnetic train transportation**Frank Werfel<sup>1</sup>, Uta Floegel-Delor<sup>1</sup>, Thomas Riedel<sup>1</sup>, Peter Schirrmeister<sup>1</sup>, Rene Koenig<sup>1</sup>, Viktor Kantarbar<sup>1</sup>, Mirko Liebmann<sup>1</sup><sup>1</sup>Adelwitz Technologiezentrum GmbH, Germany

1645

**3-LO-TG-02S****Dynamic Characteristics of the HTS Maglev Vehicle System**Zigang Deng<sup>1</sup>, Haitao Li<sup>1</sup>, Jipeng Li<sup>1</sup>, Hongdi Wang<sup>1</sup>, Yanxing Li<sup>1</sup>, Wuyang Lei<sup>1</sup>, Jun Zheng<sup>1</sup><sup>1</sup>Southwest Jiaotong University, China

1700

**3-LO-TG-03S****Comparative Study between Electromagnet and Permanent Magnet for HTS Maglev**Yuyan Wen<sup>1</sup>, Ying Xin<sup>1</sup>, Wei Hong<sup>1</sup>, Chaoqun Zhao<sup>1</sup><sup>1</sup>School of Electrical and Information Engineering, Tianjin University, China

1715	<b>3-LO-TG-04S</b> <b>A new HTS multi-filament cable to improve the efficiency of electric aircraft</b> <u>Min Zhang</u> <sup>1</sup> , Zhuyong Li <sup>2</sup> , Mingyang Wang <sup>2</sup> , Fangjing Weng <sup>3</sup> , Weijsa Yuan <sup>3</sup> <sup>1</sup> University of Strathclyde, United Kingdom and Shanghai Jiaotong University, China <sup>2</sup> Shanghai Jiaotong University, China <sup>3</sup> University of Strathclyde, United Kingdom
1730	<b>3-LO-TG-05S</b> <b>Progress Towards the Realization of a DC Superconducting Power Filter</b> <u>Loic Queval</u> <sup>1</sup> , Frederic Trillaud <sup>2</sup> , Bruno Douine <sup>3</sup> <sup>1</sup> Group of electrical engineering - Paris (GeePs), Univ. Paris-Sud, Univ. Paris-Saclay, Sorbonne University, France <sup>2</sup> Instituto de Ingeniería, National Autonomous University of Mexico (UNAM), Mexico <sup>3</sup> Group of Research in Electrical Engineering of Nancy (GREEN), University of Lorraine, France
1745	<b>3-LO-TG-06S</b> <b>HTS Power Switch for Flux Pumps</b> <u>James Gavith</u> <sup>1</sup> <sup>1</sup> University of Cambridge, United Kingdom
1800	<b>3-LO-TG-07S</b> <b>AC Loss calculation in Electrical Machines with HTS Coils using T-A Formulation</b> <u>Tara Benkel</u> <sup>1</sup> , Yingzhen Liu <sup>1</sup> , Enric Pardo <sup>2</sup> , Simon Wolfstädter <sup>3</sup> , Thomas Reis <sup>3</sup> , Francesco Grilli <sup>1</sup> <sup>1</sup> Karlsruhe Institute of Technology (KIT), Germany <sup>2</sup> Slovak Academy of Sciences, Slovakia <sup>3</sup> Oswald Elektromotoren GmbH, Germany

1930-2000 **Coaches depart for Merchant Square**

2000-0100 **Conference Dinner & Ceilidh at Merchant Square**

2300-0100 **Shuttle coaches depart for SEC**

THURSDAY 5 SEPTEMBER



EUCAS 2019  
GLASGOW



# THURSDAY 5 SEPTEMBER

0900-1000 **4-EO-PL3 Plenary 3**

**CLYDE AUDITORIUM**

Chairs: Robert Hadfield, University of Glasgow  
and Paul Warburton, UCL

## **Superconducting Quantum Circuits: Balancing Art and Architecture**

Irfan Siddiqi

Lawrence Berkeley National Laboratory and Department of Physics, University of California, United States of America



Irfan Siddiqi is a Faculty Scientist at Lawrence Berkeley National Laboratory, a Department of Energy Office of Science lab, and a Professor of Physics at the University of California, Berkeley. Irfan completed his undergraduate degree in chemistry & physics and PhD in applied physics from Harvard University and Yale University, respectively. Siddiqi and his research group, the Quantum Nanoelectronics Laboratory, focus on the development of advanced superconducting circuits for quantum information processing, including computation and metrology. Additionally, Siddiqi runs the Advanced Quantum Testbed at Lawrence Berkeley National Laboratory. Siddiqi is also the founder of the interdisciplinary Center for Quantum Coherent Science at Berkeley. Irfan is known for seminal contributions to quantum measurement science, including real time observations of wavefunction collapse, tests of the Heisenberg uncertainty principle, quantum feedback, and the development of a range of microwave frequency, quantum noise limited analogue amplifiers. Irfan is a fellow of the American Physical Society, and in 2006 was awarded the George E. Valley Jr. prize for the development of the Josephson bifurcation amplifier.

1000-1045 Refreshments & Exhibition

**HALLS 1 & 2**

THURSDAY



## 1045-1145 4-LO-PL4 Plenary 4

CLYDE AUDITORIUM

Chairs: John Durrell, University of Cambridge  
and Yifeng Yang, University of Southampton

**Accelerator Technology – Now and the future**

Amalia Ballarino  
CERN, Switzerland



Senior scientist at CERN, Amalia Ballarino was responsible for the several thousand current leads that power the superconducting magnets of the Large Hadron Collider (LHC) today. She received the award of "Superconductor Industry Person of the Year 2006" for the development of Temperature Superconducting (HTS) current leads, which was the first large-scale commercial application of HTS. After having participated in the commissioning of the Large Hadron Collider, she has been working on the development of a superconducting power transmission system based on a novel MgB<sub>2</sub> electrical transfer line. The system will be used in the LHC for the powering of the High-Luminosity (HL-LHC) magnets; it also has potential for power transmission in future grids. Since 2010, Amalia Ballarino has been in charge of superconductor development, characterization and procurement for the CERN accelerator complex. Her field of activity covers low- and intermediate-temperature (Nb-Ti, Nb<sub>3</sub>Sn and MgB<sub>2</sub>), and high-temperature (BSCCO and REBCO) superconducting wires and cables. Focus today is on the procurement of the Nb<sub>3</sub>Sn for the HL-LHC magnets and on the R&D of high-performance superconductors for future high-energy machine.

1145-1245 **ESAS General Assembly and Prize Giving (all welcome)**  
Bernhard Holzapfel, President ESAS1245-1300 **Closing Remarks**

Co-chairs: John Durrell, University of Cambridge and Robert Hadfield,  
University of Glasgow

1300-1400 **Lunch**  
In a rush? Grab a lunch bag and go.

HALLS 1 &amp; 2

# PUBLICATION OFFICE

## Location

The Publication Office is located in the Etive, ground floor in the Loch Suite.

## Opening Hours

Monday 2 September 2019	0800 – 1800
Tuesday 3 September 2019	0800 – 1800
Wednesday 4 September 2019	0800 – 1800
Thursday 5 September 2019	0800 – 1800

## Contact

For any publication related questions, please contact publications@eucas2019.org giving your Programme/ Presentation ID in any correspondence.

## Submission

All authors of accepted abstracts (oral or poster) are invited to submit a paper to the conference proceedings which will be published in the ***Journal of Physics: Conference Series (JPCS)***, a peer-reviewed, open-access journal from Institute of Physics Publishing (UK). Only work presented at the conference will be included, and only one paper per registered attendee may be submitted. JPCS paper submission (electronic only) will be handled by EUCAS 2019 who will also manage the peer-review process. Papers accepted following peer-review are expected to be published online in April 2020.

***The online submission deadline is the end of Tuesday 3<sup>rd</sup> September 2019 (24:00 hrs UK time).***

The procedure to submit a paper to JPCS is as follows:

- 1) Visit the submission site:  
<http://eucas2019.iopconferenceseries.rivervalleytechnologies.com/>. The webpage gives full details of the specific paper requirements for EUCAS 2019.
- 2) Authors should register themselves by clicking 'Register' on the menu at the top of the above webpage.
- 3) After registering, authors should log in and then click 'My Account' and select 'Submit Full Paper'.

- 4) JPCS uses author-supplied PDFs for all online and print publication. Authors are asked to prepare their papers using Microsoft Word or LaTeX, according to the journal guidelines and templates, and then convert these files to PDF. Full instructions on preparing your paper, along with templates, can be found on the IOP Conference Series website at: <http://conferenceseries.iop.org/content/authors>.

It is important to ensure that when you submit your paper, it is in its final form ready for publication, and has been thoroughly proofread. IOP do not copyedit papers and will not send out author proofs prior to publication. Please note: post-publication changes are not usually permitted, unless there are exceptional circumstances, so please ensure your paper has been checked for errors.

- 5) JPCS operates a publishing licence, under which authors retain copyright of their papers and they no longer need to sign and submit copyright assignment forms. Any author who wishes to publish a JPCS paper must agree to the terms of the licence and by submitting a paper for publication it is assumed all authors of the paper agree, in full, to the terms of the licence. The licence terms and conditions are available online at [http://conferenceseries.iop.org/content/quick\\_links/IOP Proceedings Licence](http://conferenceseries.iop.org/content/quick_links/IOP Proceedings Licence).

### **Special Focus Issue of Superconductor Science and Technology (SUST)**

In addition to the main conference proceeding in JPCS, EUCAS 2019 will publish select papers of outstanding quality in a **Special Focus Issue of Superconductor Science and Technology (SUST)**. Submission to the Special Focus Issue is by **invitation only**. Invites were sent to all plenary and invited speakers before the conference. In addition, a number of contributing speakers nominated by conference session chairs will be invited to submit a paper for consideration in the Special Focus Issue. Authors cannot publish substantially the same paper in both JPCS and SUST. Consequently authors who have already submitted a JPCS paper will have the option to withdraw it if necessary before accepting the SUST invitation. The SUST submission and peer-review will be handled by the journal itself to their usual editorial standards, using a separate submission site to the JPCS papers. Invitation to submit a paper to the Special Focus Issue does not guarantee publication. The submission deadline for the Special Focus Issue papers will be after the conference on **Tuesday 15<sup>th</sup> October 2019**, with accepted papers expected to be published online from March 2020.

# SHORT COURSES

Short courses in applied superconductivity are organised in conjunction with EUCAS 2019. They are a unique opportunity to discover and train in aspects of physics and engineering that cannot be found in a standard

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## Course 1:

### **Design of Superconducting magnets for particle accelerators and detectors**

**Date:** Sunday 1 September  
**Time:** 1000-1730  
**Location:** M3, SEC Glasgow

This course covers the design of superconducting magnets for particle accelerators and detectors. The lectures are intended for physicists and engineers working in the areas of magnet technology and applied superconductivity, and interested in basic principles, physical parameters, analytical and numerical tools used for superconducting magnet design. For each of the applications considered, the courses will start by presenting the properties and characteristics of superconducting strands and cables. The main concepts related to magnetic design and coil lay-outs will be then outlined. In addition, the lectures will deal with the mechanics and fabrication techniques of a superconducting magnet, focusing in particular on coils and the structural components aimed at containing the electro-magnetic forces and managing the stresses. Finally, a description of the different systems devoted to cool and protect a magnet after a quench will be provided.

#### **Speakers:**

Dr Paolo Ferracin, CERN, Switzerland  
Prof Herman Ten Kate, University of Twente, Netherlands

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## Course 2:

### **Superconducting Power Devices**

**Date:** Sunday 1 September  
**Time:** 1000-1730  
**Location:** M2, SEC Glasgow

Many power system applications are under development using superconducting materials. Novel designs have been proposed to take advantage of the unique properties of superconducting materials and to achieve new functionalities and higher performance standards compared to conventional power devices. The short course on Superconducting

Power System Applications will cover Superconducting Fault Current Limiters, Superconducting Transformers, Superconducting Rotating Machinery, Superconducting Cables and Superconducting Magnetic Energy Storage. The course will cover the fundamentals of each application and describe, using case studies, some specific design considerations and demonstrator devices. The course will also summarize some of the future directions and research needs for advancing Superconducting Power System Applications.

**Speakers:**

Dr Mark Ainslie, University of Cambridge, UK

Prof Antonio Morandi, University of Bologna, Italy

Prof Mathias Noe, Karlsruhe Institute of Technology (KIT), Germany

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**Course 3:**

**Superconducting Electronics and Quantum Computation**

**Date:** Sunday 1 September

**Time:** 1000-1300

**Location:** M4, SEC Glasgow

The Josephson effects are the basis for many applications in the field of superconducting electronics. First there will be a discussion of these effects from theoretical aspects up to applications. After introduction of single Josephson junctions different circuits will be introduced like superconducting quantum interference devices (SQUIDs) and many junction arrays for the voltage standard. The superconductor digital electronics reaches from classical logic circuits up to advanced devices and quantum computing.

**Speaker:**

Prof Paul Seidel, Institute of Solid State Physics, Friedrich Schiller University Jena, Germany

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# PUBLIC LECTURE

A lecture entitled James Watt and Precision Engineering will take place in the Clyde Auditorium on Tuesday 3 September 1830-2000 by Professor John Marsh, School of Engineering, University of Glasgow.

James Watt is one of the most illustrious engineers to be associated with the University of Glasgow. His most significant invention – the separate condenser – came to him while walking close to Glasgow Green in 1765, at a time when he was Mathematical Instrument Maker to the University. Later elected a Fellow of the Royal Society of Edinburgh (1784) and the Royal Society of London (1785), he was awarded an honorary degree by the University in 1806.

Although he did not invent the steam engine, his inventions improved their efficiency by a factor of more than 4 – so mechanical engines could do the work previously done by people and animals. As a result, by 1900 steam engines did more work than the entire world population could have done if employed solely in manual labour. The ‘age of steam’ is an expression used to describe the period between the start of the industrial revolution and the early part of the 20th century, but even today around 80% of the world’s electricity is generated using steam.

James Watt’s successful development of powerful and efficient steam engines took years of hard work, requiring a combination of his inventive mind, his interests in precision measurement, and the best engineering technology of the time.

The tradition of bringing inspirational ideas together with precision engineering continues to the present in the School of Engineering and in the James Watt Nanofabrication Centre. The presentation will reflect on Watt’s life, his inventions and the challenges he faced and relate his experience to that of carrying out world-leading engineering research today.



**Professor John Marsh**  
**Professor of Optoelectronic Systems**  
**and Dean of University of Glasgow-UESTC**

John Marsh is known for contributions in semiconductor laser technology and integrated optics, ranging from epitaxial growth through to the design and development of integrated laser modules. His research has encompassed fundamental electrical and optical properties of semiconductors, development of novel optoelectronic devices, processes for fabricating photonic integrated circuits, integrated mode-locked lasers for ultra-short pulse generation, and development and manufacturing of high-power laser array modules. As an entrepreneur he has cofounded three companies, including Intense Ltd in 2000 to exploit his research in high power lasers; the company was sold in 2011 and continues to operate from a base in New Jersey. A Fellow of the Royal Academy of Engineering, Royal Society of Edinburgh, IEEE, OSA, IET, Institute of Physics and Royal Society of Arts, he was President of the IEEE Photonics Society in 2008-9. He was awarded the 2006 IEEE/LEOS Engineering Achievement Award and the 2006 LEOS Distinguished Service Award. He received the Chengdu Jinsha Friendship Award from the City of Chengdu in Sichuan Province, China, in 2017.

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# SOCIAL EVENTS

## Civic Welcome Reception

**1800-2000 Sunday 1 September 2019  
at the Glasgow Science Centre**

Civic reception hosted by The Rt Hon The Lord Provost of Glasgow.



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## **Exhibitor Reception & Whisky Tasting**

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**1815-2000 Monday 2 September 2019 in Halls 1 & 2**

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You will have the opportunity to taste a number of Scottish whiskies, as well as purchase bottles.

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## **Conference Dinner & Ceilidh**

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**2000-0100 Wednesday 4 September 2019 at Merchant Square**

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Coach transport departs from the front of the Armadillo to go to Merchant Square from 1930. A return shuttle service will run between 2300 - 0100 returning to the SEC.

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### **What is a Ceilidh?**

A ceilidh (pronounced kay-lee) is a traditional Scottish social gathering, involving Scottish country dancing and Gaelic folk music. We have a live ceilidh band and professional Scottish dancers to show you how it's done and get you on your feet.

### **Refreshments & Lunches**

Refreshments and lunches take place in Halls 1 and 2. Lunch is included for delegates, accompanying guests and exhibitors.

Lunch on Thursday is a lunch bag, so if you are in a hurry, you can still take a lunch bag and go.





# ANCILLARY MEETINGS

## Sunday 1 September 2019

### **ESAS Board Meeting**

(by invitation only)

1600-1800

Room M4 (Meeting Academy)

## Monday 2 September 2019

### **SUST Board Meeting**

(by invitation only)

1245-1400

Room M2 & M3 (Meeting Academy)

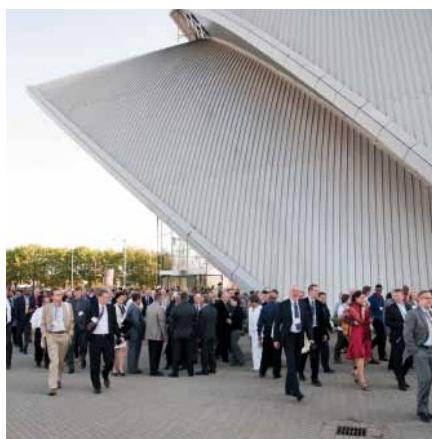
## Tuesday 3 September 2019

### **IEC-IEEE Board Meeting**

(by invitation only)

1245-1445

Room M2 & M3 (Meeting Academy)



## Wednesday 4 September

### **SuperOx Meeting**

(by invitation only)

0900-1000

Room M2 & M3 (Meeting Academy)

### **EUCAS 2019 Sub-editors' Meeting**

(by invitation only)

1315-1415

Room M2 & M3 (Meeting Academy)

## Thursday 5 September 2019

### **ESAS General Assembly**

ESAS holds its General Assembly at EUCAS, all EUCAS registrants are qualified ESAS members. You are invited to participate to the general ESAS assembly.

1145-1200

Clyde Auditorium (after Amalia Ballarino plenary)

### **CIGRE Working Group D1.64**

(by invitation only)

0900-1600

Room Dochart 1

### **IEC/TC90 - WG3**

(by invitation only)

1400-1600

Room Carron 1

### **IEC/TC90 - WG12**

(by invitation only)

1600-1800

Room Carron 2

### **ESAS Board Meeting**

(by invitation only)

1400-1700

Room M2 (Meeting Academy)

# PRACTICAL INFORMATION

## Registration

Registration desks are located in Hall 1 at the SEC. Delegates should collect their badge and conference bag at Registration, upon arrival at the SEC.

The badge must be worn prominently in order to gain access to the SEC, including all scientific and social events. Admission will be refused to anyone not in possession of an appropriate badge.

If you have lost your badge, a replacement badge can be printed at the Help Desk.

Registration opening hours are:

Sunday 1 September 2019:	0930 - 1900
Monday 2 September 2019:	0800 - 2000
Tuesday 3 September 2019:	0800 - 1815
Wednesday 4 September 2019:	0800 - 1815
Thursday 5 September 2019:	0800 - 1400

## Help Desk

The conference Help Desk is located in Hall 1 for any queries relating to payment, badge reprinting, or access. The Help Desk can be contacted on +44 (0)1722 430766 from 0800-2000.

## Exhibitor Desk

The Exhibitor Desk is located in Hall 1 for any queries relating to your exhibition stand.

## Poster Desk

The Poster Desk is located in Hall 1 for the poster plan and Velcro.

## Venue

Scottish Event Campus (SEC)  
Exhibition Way  
Glasgow G3 8YW, Scotland  
Tel: +44 (0)141 248 3000  
Email: [info@sec.co.uk](mailto:info@sec.co.uk)  
[www.sec.co.uk](http://www.sec.co.uk)

## **WiFi**

Complimentary WiFi is available throughout the SEC. No username or password is required.

Network: SEC

Complimentary WiFi is available in the Glasgow Science Centre.

Network: EUCAS

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## **Water**

In order to reduce single use plastic bottles, water coolers are situated in Halls 1 and 2. Delegates are encouraged to refill their own reusable water bottles.

## **Bank**

There are two Clydesdale Bank ATMs in the west lobby of the SEC.

## **Cloakroom**

Located in the west lobby of the SEC. Please note there will be a charge per item for this service.

## **First Aid**

If medical assistance is required:

1. Go to the SEC First Aid Room, located next to the information desk on the concourse OR
2. 0141 576 3290 (non-emergency control room) OR speak to any steward for assistance

If urgent medical assistance is required and the patient is unable to get to the First Aid Room

3. Dial 0141 576 3888 (emergency control room) OR
4. Dial 999 and notify a member of the security staff and/or organisers, giving the location of the incident AND
5. Remain with the injured person until the arrival of the medical staff

Neither EUCAS 2019 nor the conference organisers are responsible for individual medical, travel or personal insurance. Delegates are requested to arrange their own travel and health insurance.

## **Smoking Policy**

There is no smoking policy within the SEC, Glasgow Science Centre, Merchant Square or any building..

## **Lost Property**

Lost property will be handed in to the Information Desk located on the Concourse.

## **Code of Conduct**

All exhibitors are expected to comply with the code of conduct to providing a friendly, safe, harassment-free conference for everyone, regardless of gender, gender identity and expression, sexual orientation, disability, physical appearance, body size, race, or religion.

## **Photography/Videography Policy**

To avoid disruption, no photography or video recording of presentations is permitted.

## ■ Characteristic Features

- Superior in-field critical current and excellent mechanical properties applicable for compact applications
- Original lay manufacturing techniques of TiB2 & RLD process enabling high superconducting performance



## ■ Schematic of Typical specification



## ■ Typical Specifications

Product	Width (mm)	Thickness (mm)	Inductance (nH)	Resistance (mΩ)	Critical Current (A)	Notes
PYBC-80H04	4	0.10	70	20	~1,000	HTS
PYBC-80H12	12	0.10	70	20	~800	—
PYBC-8L2 m1	12	0.08	70	—	~500	—
PYBC-60H04 m1	4	0.11	50	20	~800	HTS
PYBC-80H04 m2	12	0.11	50	20	~250	—

\*1 HTS wire without superinsulation available in only 12mm wide for compact lead application.

\*2 Material showing application for use at low temperature and high magnetic field.

\*3 2000K. RT is a reference value and not guarantee of the actual performance.

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# IN MEMORIAM

## Massimo Marezio (1930 – 2019)

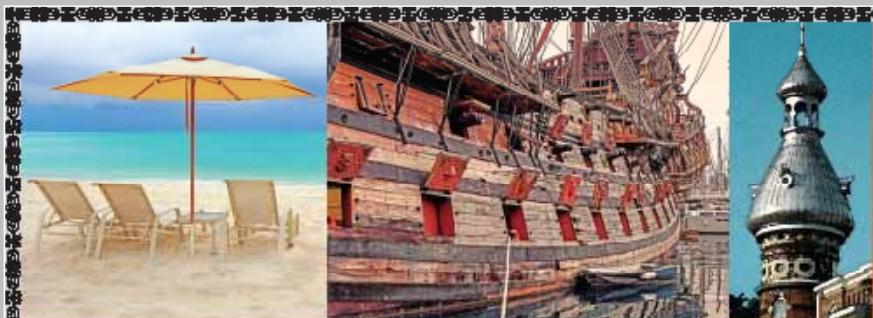
Massimo Marezio passed away this year ending a brilliant career, which was dedicated on the one hand, to the discovery and crystallographic study of new materials, and high critical temperature superconductors (HTS) in particular, and on the other hand to the federation of research activities.

Following his thesis in the field of physics-chemistry at the University of Rome in 1954, Mr Marezio began his research with Professor A. Cimino at the University of Rome. He then worked at the University of Chicago where he distinguished himself with the crystallographic study of new compounds. His results earned him recognition and recruitment in 1963 to the Bell Telephone Laboratory in TH Geballe's group in which BT Matthias explored original ways of finding new superconductors with J. Remeika and DB McWhan.

His 1969 sabbatical year at the Laboratory of Metal Physics of Grenoble CNRS led by Louis Néel proved key for his career. He was recruited in 1973 to the Laboratory of Crystallography and became director from 1982 to 1990. Dr Marezio used the discovery of HTS in 1986 to develop the means of synthesis (including pressure synthesis), electron microscopy and crystallography of new SC phases. It brought together the skills of Caen (B. Raveau) and Grenoble to the ILL (A. Hewat) and the CNRS to determine the structure of YBCO in a highly cited work. The interactions he maintained between CNRS and the ATT Bell Laboratories (1986-1995), particularly with R. J. Cava, proved exceedingly positive and fruitful in a period of intense competition. Thanks to the interactions with the researchers of the Moscow University (E.V. Antipov and S.N. Putilin) the first elements of the mercury cuprate family were synthesized under pressure in Grenoble. The T<sub>c</sub> record 165 K was determined under high pressure (20 GPa) simultaneously in Houston and Grenoble in 1993.

Until his retirement in 1996, Massimo led and directed research on HTS at the CNRS. However, "retirement" didn't compute to a someone as passionate as Massimo, who was then invited by the Consiglio Nazionale delle Ricerche (CNR) in Italy in 1996 to be a scientific expert an outstanding status under the guidance of L. Zanotti and F. Licci in Parma. During his mission there (1996-2001), Massimo set up a new research activity on the synthesis of new metastable phases under high pressure, carried a national project of CNR on the industrial applications of superconductivity and devoted himself to the federation of research on materials and applications of superconductors at the European level within the thematic network SCENET (Superconducting European Network) funded by the European Commission. SCENET included about 60 academic laboratories and 30 industrial laboratories and allowed better coordination of research activities in the field of superconductivity and its applications. This activity contributed to cement the links of the European superconductivity community and train a new generation of researchers through the organization of a series of summer schools. Back in Grenoble in 2002, Massimo continued to lead the SCENET network and conduct research on new superconducting phases. The work of Massimo Marezio, imbued with both creativity and great scientific rigor, is marked by numerous publications (more than 300) and results that are always authoritative and earn him world-wide recognition. He trained many doctoral students. The list of his achievements however, only partially reflects the importance of his work, which was especially marked by his human qualities and ability to gather the skills required for breakthroughs.

Massimo Marezio leaves us with the memory of a man, who showed great kindness, listened to everyone, and was always open-minded to be able to give birth to new ideas.



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| Chen, Ke                   | 1-EP-JJ  | Conde-Gallardo, Agustin     | 3-MP-FM   |
| Chen, Lei                  | 1-EP-JJ, 3-EO-SNQ                                | Congreve, Jasmin            | 3-MO-CU   |
| Chen, Liyun                | 1-EP-JJ, 2-EP-DE2                                | Constantinian, Karen        | 3-EO-TS   |
| Chen, Olivia               | 2-EO-DE1   | Constantino, Nicolas        | 3-EO-FA   |
| Chen, Qi                   | 1-EP-SP  | Cooley, Lance               | 3-LO-CA   |
| Chen, S K                  | 1-MO-SCC   | Coombs, Tim                 | 2-LP-FCT, 3-LP-HM, 3-LO-HH                      |
| Chen, Shi                  | 2-EP-DE2   | Cooper, Jonathan            | 3-MO-BM   |
| Chen, Shu                  | 2-EO-QT  | Corato, Valentina           | 1-LO-FL   |
| Chen, Wei                  | 1-MP-EP, 3-MP-MO1, 3-LP-NM                       | Corduan, Matthias           | 2-LO-EA, 2-LP-SMA                               |
| Chen, Yong                 | 3-MP-MO1   | Couédo, François            | 1-EP-JJ, 1-EP-SP, 1-EO-AJ                       |
| Chen, Yongliang            | 2-MP-NB  | Cox, David                  | 3-EP-SQ   |
| Chen, Yu-Ren               | 3-EP-SQ  | Crescini, Nicolo            | 3-EO-FA   |
| Chen, Zhi Ning             | 2-EP-SDP   | Crété, Denis                | 1-EO-AJ   |
| Cheng, Cuihua              | 2-MP-NB  | Creusot, Christophe         | 2-LP-CO   |
| Cheng, Ran                 | 1-EP-EA, 2-EP-DE2                                | Crisan, Adrian              | 2-MP-FP3, 3-MP-FP5                              |
| Cheng, Yi                  | 2-LP-SMA   | Cristiani, Georg            | 3-EO-TS   |
| Cheng, Zhe                 | 3-MP-FM  | Cristiano, Roberto          | 3-EP-SQ   |
| Chengshan, Li              | 3-MP-FM  | Cruciani, Angelo            | 2-EP-SDP  |
| Chen-Mayer, Heather        | 3-MP-MD  | Cubero, Álvaro              | 2-LO-OM, 3-LP-HM                                |
| Chepikov, Vsevolod         | 2-MO-CP  | Cuninková, Eva              | 3-MP-CC3  |
| Cherednichenko, Sergey     | 1-EO-NW, 2-EP-SDP                                | Cure, Benoit                | 1-LO-AM1  |
| Cherif, Chokri             | 3-LP-LE  | Cyburt, Shane               | 3-EO-SNQ  |
| Cherpak, Nickolay (Mykola) | 3-MP-FM  |                             |   |
| Chesta, Enrico             | 1-LP-AM2   |                             |   |
| Chiarelli, Sandro          | 3-MO-BM  |                             |   |
| Chichkov, Vladimir         | 2-EO-DA  |                             |   |
| Chikumoto, Noriko          | 1-MP-SPR, 2-LO-FH                                |                             |   |
| Chiodi, Francesca          | 3-EO-TM  | D'Agostino, Domenico        | 1-MP-SPR  |
| Chiriac, Rodica            | 1-MO-N3T   | da Silva Lopes, Artur Jorge | 1-MP-CU   |
| Chislett-McDonald, Simon   | 2-MP-NB  | Dabironezare, Shahab        | 3-EO-TM   |
| Chiu, Wei-Wen              | 3-EP-SQ  | Dabrowski, Bogdan           | 1-MP-FP2  |
| Chiuchiolo, Antonella      | 1-LO-AM1   | Dadhich, Anang              | 1-MO-BK1  |
| Choi, Jun Hyuk             | 3-MP-MG  | Dadiel, Longji              | 3-MO-BM   |
| Choi, Kyeongdal            | 1-LP-FCL, 3-LP-BM, 3-LP-HC                       | Dai, Chao                   | 1-LP-FM, 1-MP-BI, 2-LP-MR,<br>2-MP-NB, 3-MP-CC3 |
| Choi, Seyong               | 3-MP-MG  | Dai, Jinhao                 | 2-EP-TMP  |
| Chong, Shen                | 2-MP-FP3, 3-MP-FM                                | Dai, Shaotao                | 1-LO-SFC, 3-LP-BM                               |
| Chromik, Stefan            | 2-MP-FP3   | Dai, Tianli                 | 2-LP-MR   |
| Chu, Jingyuan              | 1-MP-CC1   | Dai, Yinming                | 3-LO-HL   |
| Chu, Yong                  | 1-LP-FM  | Daibo, Masanori             | 1-MO-SCC  |
| Chukharkin, Maxim          | 1-EO-AJ  | Dam, Magnus                 | 1-LP-AM2  |
| Chung, Juhyun              | 1-MP-FP2   | Danaie, Mohsen              | 1-MP-CC1  |
| Ciceron, Jérémie           | 3-LP-LE  | Dane, Andrew                | 1-EO-NW, 1-EP-SP                                |
| Cientanni, Vito            | 3-LP-HM, 1-MP-EP                                 | Daniel, Andrada             | 1-MP-CU   |
| Ciontea, Lelia             | 1-MP-FP2, 3-MO-CU, 3-MP-FP5                      | Danilin, Sergey             | 3-EP-QQ, 2-EP-TMP                               |
| Cirillo, Matteo            | 3-EP-SQ  | Danilov, Andrey             | 2-EO-QT   |
| Clarke, Simon J.           | 3-MP-FM  | Dao, Van Quan               | 1-LP-FCL  |
| Climente-Álarcón, Vicente  | 2-LO-RM, 1-MO-BK1, 1-MO-MP,<br>2-LP-CO, 2-LP-SMA | Davidas, Ana-Cristina       | 1-EP-EA   |
| Coelingh, Gert-Jan         | 1-LO-AM1   | Davies, Timothy             | 1-MO-BK1, 2-MP-NB                               |
| Colangelo, Marco           | 1-EO-NW, 1-EP-SP                                 | Davis, Daniel S.            | 3-MO-BM, 3-LO-HH                                |

## D

Day, Peter. K.	2-EP-SDP	Doert, Thomas	3-MP-FM
de Andrade Júnior, Rubens	2-LP-FCT	Doi, Toshiya	1-MP-CU, 1-MP-CC1, 2-MP-CC2,
de Andrade, Marcio	3-EO-TS		3-MP-CC3, 3-MP-MG
de Bruyn, Bart	3-LP-NM	Doi, Yuma	2-LP-SMA
De Gerone, Matteo	2-EO-DA	Dolata, Ralf	2-EP-TMP, 3-EO-TM
de Graaf, Sebastian	2-EO-QT	Dold, Gavin	3-EO-SNQ
de Léo, Ana Carolina	1-MP-CU	Doll, David	2-LP-MR, 3-MO-BM
De Leo, Natascia	3-MP-MD	Dominjon, Agnes	3-EO-TM
De Marzi, Gianluca	3-LP-NM, 3-MP-FP5, 2-MO-FP1, 3-MP-FM	Donato, Mattia	3-MP-MG
de Oliveira Junior, Alexssandre	1-MP-SPR	Dong, Chiheng	3-MP-FM
de Rijk, Gijs	1-LP-AM2, 1-LO-AM1, 3-LP-BM	Dong, Hui	3-EP-SQ
De Roo, Jonathan	1-MP-FP2, 2-MO-FP1	Dong, Qi	2-LP-SMA
de Sousa, Wescley Tiago Batista	2-LP-FCT	Dong, Qian	3-LP-LE
de Visser, Pieter	3-EO-TM	Dong, Xiaoli	3-MP-FM
Débarre, Dominique	3-EO-TM	Donnelly, Christine	2-EP-TMP, 2-EO-DE1
Debray, François	3-LO-HH	Dorget, Rémi	1-LP-PC, 3-LP-BM
Degtyarenko, Pavel	1-LP-PC, 2-MO-CP	Dorsch, Eric	3-EO-TM
Dekamp, Jon	1-LP-AM2	dos Santos Costa, Felipe	2-LP-FCT
Dekker, Ronald	2-EP-DE2	Douine, Bruno	2-MP-FP3, 3-LO-TG, 3-MP-MO1, 3-LP-HC, 3-MP-FP5
Delagrange, Raphaëlle	3-EO-TM	Down, Richard	1-MP-SPR
DeLeon, Daniel	1-MO-SCC	Doyle, Simon M.	3-EO-TM
Delfanazari, Kaveh	1-EO-AJ	Drache, Johannes	1-MP-SPR
della Corte, Antonio	1-LO-FL	Dresselhaus, Paul	2-EO-DE1, 2-EP-TMP, 3-EO-FA
Delport, Johannes	1-EP-JJ	Driscoll, Judith	2-MO-FP1
Demétrio Mariano		Drung, Dietmar	1-EO-AJ
Dias Carneiro, Henrique	2-LP-FCT	Du, Boxue	2-LP-CO
Demise, Junya	3-MP-MG	Du, Ho lk	3-MP-CC3
Demolon, Pierre	2-MO-AP	Du, Jia	1-MP-FP2, 1-EP-EA
Deng, Zigang	3-LP-LE, 3-LO-TG	Du, Shuangsong	1-LP-FM
Dennis, Anthony R.	1-MP-CU, 1-MP-EP, 1-MO-MP, 1-MO-BK1, 2-MP-BK2, 2-LP-RF, 3-MO-CU, 3-LP-BM, 3-LP-HM	Du, Xiaoji	1-LP-PC
Deryagina, Irina	2-MP-NB	Duan, Hao	3-LP-NM
Deutscher, Guy	1-LP-FCL, 3-MO-FP4	Duarte, Elwís	2-MP-FP3
deWaele, A.T.A.M.	2-LO-EA	Dubinin, Mikhail	1-LO-CA
Dezhin, Dmitry	2-LP-SMA	Dudarev, Alexey	1-LO-AM1, 3-LP-NM
Dezhina, Irina	2-LP-SMA	Dular, Julien	1-MP-CC1, 3-MP-MO1
Dhulst, Chris	3-MP-MG	Duman, Şeyda	1-MP-CU
Di Domizio, Sergio	2-EP-SDP	Dumitru, George	3-LP-HM
Di Gioacchino, Daniele	3-EO-FA	Dunin-Borkowski, R. E.	3-EP-SQ, 3-EO-TS
Di Zenobio, Aldo	1-LO-FL	Dupont-Ferrier, Éva	3-EO-SNQ
Dickson, Matthew	3-MP-MD	Durrell, John H.	1-MO-MP, 1-MO-BK1, 1-MP-CU, 2-MP-BK2, 2-LP-RF, 3-MO-CU, 3-LP-BM, 3-LP-HM
Dicuonzo, Ortensia	1-LP-FM	Dutoit, Bertrand	1-LO-SFC, 1-LP-FCL, 2-LP-FCT, 3-MO-FP4
Didier, Gaëtan	1-LP-FCL	Dvoranová, Mária	1-MP-SPR
Diduszko, Ryszard	3-MP-FM, 3-MP-MG		
Diev, Dmitry	3-LP-BM		
Díez Sierra, Javier	1-MP-CU, 2-MO-FP1		
Dinescu, Adrian	1-MP-FP2		
Dixon, Iain	3-LO-HH	Eardley, Edwin	2-MP-BK2
Dixon, Thomas	2-EP-TMP	Ebana, Akiya Sean	3-EP-SQ
Dobrin, Andrei	3-LP-HM	Ebara, Yuta	2-LP-MR
Dobrin, Ion	3-LP-HM	Edison, Arthur	2-EP-TMP
Dobrovolný, Kryštof	1-MP-CU	Eguchi, Ryo	2-LP-MR
Doerner, Steffen	1-EO-NW	Eisaki, Hiroshi	3-MO-FW, 3-MP-FM, 3-MO-FP4,

## E

Esterer, Michael	3-MP-FM, 3-EO-TM 1-MP-BI, 1-MP-CC1, 1-MO-N3T, 2-MP-FP3, 2-MO-CP, 2-MP-CC2, 2-MP-NB, 3-MP-FP5, 3-MO-CU, 3-MO-FP4	Feng, Jianqing Feng, Qingrong Feng, Yong Fenton, J. C. Ferdegħini, Carlo	3-MP-MG 3-MP-MG 2-MP-NB 3-EP-QQ, 3-EO-FA 3-MO-CU, 3-MP-MG, 3-MO-FP4, 3-MO-BM
Ejrnaes, Mikkel	3-EP-SQ	Fernández-Rodríguez, Alejandro	3-MO-CU
Elarabi, Asem	1-EP-JJ	Ferracina, Samuele	2-EP-SDP
Elbaa, Mohamed	3-MP-FP5	Ferradas Troitino, Jose	1-MO-N3T
Elschner, Steffen	1-LP-PC, 2-LP-FCT	Ferraresi Lupi, Federico	3-MP-MD
Elshiekh, Mariam	3-LP-LE	Ferrarese, Fabrizio Mario	1-MP-CU
El-Wakeel, Abdelrahman	1-LP-PC, 3-LP-LE	Ferrari, Simone	1-EO-NW
Enache, Dan	3-LP-HM	Ferreira da Silveira, Máximo	1-MP-CU
Endo, Akira	3-EO-TM	Ferri, Elena	2-EP-SDP
English, Charles	3-LO HH	Ferring, Anna	3-EP-SQ
Enss, Christian	1-EP-JJ, 3-EP-SQ, 3-EO-SNQ	Fetisov, Sergey	1-LO-CA, 3-LP-HC
Erbe, Manuela	1-MP-CU, 1-MO-MP, 1-MP-FP2, 2-MO-FP1	Feuillet-Palma, Cheryl	1-EP-SP, 1-EP-JJ, 1-EO-AJ
Ermakov, Andrey	2-EO-DA	Fiamozzi Zignani, Chiarasole	1-LO-FL, 3-MP-FM
Erni, Pascal	1-MP-SPR	Fietz, Walter H.	1-LO-CA
Erotokritou, Kleanthis	1-EP-SP	Filar, Krzysztof	3-MP-FM, 3-MP-MG
Escamez, Guillaume	1-LP-PC, 2-LP-FCT, 1-LO-SFC	Filatrella, Giovanni	2-EP-SDP
Eschrig, Matthias	3-EO-TS, 2-EO-QT	Filicori, Fabio	1-MP-SPR
Espenahn, Tilo	3-LP-LE	Filipenko, Mykhaylo	1-MP-CU, 2-LO-EA, 2-LP-SMA
Evans, Beth	1-MP-SPR	Filippenko, Lyudmila	2-EP-TMP
Evgeni, Illichev	3-EO-FA	Filippov, Timur	2-EP-DE2
<b>F</b>			
Fabbri, Fabio	1-MP-SPR, 1-MP-CU, 3-MP-FM, 3-MP-FM, 3-MP-FM	Fink, Stefan	1-LP-PC
Fabbricatore, Pasquale	1-LO-AM1	Ficarelli, Lucio	1-LO-AM1
Fagnard, Jean-François	1-MP-SPR, 2-LO-OM	Fischer, David X.	3-MO-FP4, 3-MP-FP5, 1-MP-CC1
Fairman, Philip	3-EP-SQ, 1-EO-AJ	Fleischmann, Andreas	3-EO-SNQ
Faley, M. I.	3-EO-TS, 3-EP-SQ	Fleiter, Jerome	1-LP-AM2, 2-MP-NB, 3-LP-NM, 2-MO-AP, 3-LP-HC
Falorio, Iole	3-LP-HC	Floegel-Delor, Uta	1-MP-CU, 3-LO-TG
Falter, Martina	1-MP-CU, 1-MO-SCC, 1-MP-CU, 2-MO-FP1	Florya, Irina	2-EO-DA
Fan, Dong-Rui	2-EO-DE1, 2-EP-DE2	Foley, Cathy	3-MP-MD, 3-EP-SQ, 1-EO-AJ
Fan, Heng	2-EO-QT	Foltyn, Marek	2-EO-DA
Fang, Jin	2-LP-FCT, 3-LP-HC, 3-LP-NM, 3-MP-FP5	Fominškiy, Mikhail	2-EP-TMP
Faoro, Lara	2-EO-QT	Fourie, Coenrad Johann	1-EP-JJ, 1-EP-EA, 2-EP-DE2, 3-EP-SQ
Fareed, Muhammad Umar	2-MP-FP3, 3-LP-HC	Fowler, Joseph W.	2-EO-DA
Farinon, Stefania	1-LO-AM1	Fox, Anna	3-EO-FA, 2-EP-TMP
Farjas, Jordi	3-MO-CU, 2-MO-FP1	Frank, Michael	2-LO-RM
Farrer, Ian	1-EO-AJ	Frédéric, Forest	3-LP-LE
Faverzani, Marco	2-EP-SDP, 2-EO-DA	Freisleben, Walter	1-LP-AM2
Favier, Ludovic	1-LP-AM2	Freitag, Wolfram	1-MP-CU, 2-MO-FP1
Fazilleau, Philippe	3-LO HH	Fretto, Matteo	3-MP-MD
Febvre, Pascal	2-EP-DE2, 1-EP-JJ, 3-EP-SQ	Freytag, Nicolas	2-EP-TMP
Feighan, John	1-MP-FP2, 2-MO-FP1	Fricke, Marko	1-LP-FM
Feldman, Leonard	1-EP-JJ	Friedman, Alex	3-LP-LE
Felgner, Judith	2-EP-TMP	Frolek, Lubomir	3-MP-CC3
Fellows, Jonathan	3-MP-MD	Frolova, Anna	3-MP-FP5
Feng, Changle	1-LP-FM	Fry-Bouriaux, Louis	3-EP-QQ
		Fu, Rong-Liang	2-EP-DE2
		Fuchs, Dirk	2-MO-CP
		Fuchs, Günter	3-LP-LE
		Fujihisa, Hiroshi	3-MP-FM
		Fujimaki, Akira	1-EP-EA, 3-EP-SQ

Fujishiro, Hiroyuki	2-MP-BK2, 3-LP-BM, 2-MP-FP3, 1-MO-MP, 1-MO-BK1	Geuzaine, Christophe	1-MP-CC1, 3-MP-M01
Fujita, Shinji	1-MO-SCC	Ghabeli, Asef	3-LP-NM
Fujita, Shuma	1-EP-JJ	Ghigo, Gianluca	2-EP-SDP, 2-MO-FT, 3-MP-MG, 3-MO-FP4, 3-MP-FM
Fukuda, Mitsuhiro	2-LP-MR	Ghosh, Ajay Kumar	2-MP-BK2
Fukui, Satoshi	3-LP-HC, 3-MO-BM	Giachero, Andrea	2-EO-DA, 2-EP-SDP
Fukumoto, Yusuke	1-LP-PC	Giannini, Enrico	1-MO-BK1
Fukushima, Toru	1-MP-FP2	Giannini, Lorenzo	1-LO-FL
Funaki, Shuhei	2-MP-CC2	Giblin, Sean	3-MP-MD
Furukawa, Takuma	1-MP-SPR	Gilst, Danielle	1-MP-BI
Furuse, Mitsuho	1-MP-CC1	Girodet, Alain	2-LP-CO
Furuya, Taiki	1-MP-FP2	Gleixner, Thomas	2-LO-EA
Futamura, Muneo	3-LP-LE	Glowacki, Bartłomiej	1-MO-MP, 1-MO-BK1, 2-LO-RM, 2-LP-CO, 2-LP-SMA, 3-MP-MG
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<b>G</b>			
Gabcan, Ludmila	1-MP-CU	Gnilsen, Johannes	2-MP-CC2, 2-MO-CP
Gabor, Mihai Sebastian	1-EP-EA, 1-MP-CU, 1-MP-FP2, 3-MO-CU	Godeke, Arno	2-LO-OM
Gaffoor, Mohammed Zaahid	2-MP-BK2	Godfrey, Tom	3-EP-SQ
Gafullin, Marat	1-MP-FP2, 1-MP-SPR	Gokhfeld, Denis	3-LP-HC
Gajda, Daniel	3-MP-FM, 3-MO-BM, 3-MP-MG	Golokolenov, Ilya	3-EO-TM
Gajda, Grzegorz	3-MP-FM, 3-MP-MG	Golosnoy, Igor	1-LP-PC
Gallego, Aitor	3-MP-CC3	Golovchansky, Igor	1-EP-JJ
Gallop, John	3-EP-SQ	Goltsman, Gregory	1-EO-NW, 2-EO-DA
Gallois-Lavallee, Olivier	2-LP-CO	Golubov, Alexander	3-EO-TS, 1-EP-JJ
Gallucci, Giovanni	2-EO-DA	Gömöry, Fedor	1-MP-EP, 1-LP-FCL, 2-LP-FCT, 2-MO-CP, 3-MP-CC3, 3-MP-FP5
Galstyan, Eduard	2-MO-AP	Gonçalves Sotelo, Guilherme	2-LP-FCT
Gambardella, Umberto	1-MP-SPR	Goo, Jisung	3-LP-HC
Gamerle, Luc	1-MO-N3T	Gordeeva, Anna	3-EO-FA
Gan, Zizhao	3-EP-SQ, 3-MP-MG	Gosselin, Olivier	2-LO-EA
Ganni, Rao	1-LP-AM2	Goteti, Uday Sravan	1-EP-EA, 2-EP-DE2
Gao, Bo	1-MP-SPR, 2-EP-SDP	Goto, Takuya	1-LP-FM
Gao, Han	3-LP-NM	Gotoh, Yoshito	3-MP-FM
Gao, Huijuan	1-LP-FCL	Gozzelino, Laura	2-EP-SDP, 2-MO-FT, 3-MO-FP4, 3-MP-MG
Gao, Lei	1-LO-SFC, 2-LP-CO	Graber, Lukas	1-LO-CA, 1-LP-PC
Gao, Peifeng	3-LP-NM, 3-MP-CC3	Granadeiro Costa,	
Gao, Xiang	1-LP-FM	Angelo Rafael	2-MO-AP
Gao, Xiaoping	2-EP-DE2, 1-EP-JJ	Granados, Xavier	1-LO-SFC, 3-MO-CU, 1-MP-CC1, 2-LP-RF, 3-MO-FP4
Gao, Zilin	2-MP-BK2	Granata, Carmine	3-EO-SQ
García, Diana	1-MP-FP2, 1-MP-CC1	Grancea, Alex	1-EO-AJ, 3-EP-SQ
García, Vanessa	2-LP-RF	Granić, Branislav	1-MP-SPR
Gard, Johnathon D.	2-EO-DA	Green, Michael	3-LP-HC
Gatti, Claudio	3-EO-FA	Greenwood, Jack	1-MO-MP
Gauquelin, Nicolas	1-MP-FP2	Gregor, Maroš	3-MP-MD, 1-MP-SPR
Gavrilkin, Sergei	3-MP-FM	Grib, Alexander	1-EP-JJ
Gawith, James	3-LO-TG, 3-LP-HM	Grigoroscuta, Mihai	2-MP-FP3, 3-MP-MG, 3-LP-BM
Gazquez, Jaume	2-MO-FP1	Grilli, Francesco	1-MO-BK1, 2-LO-EA, 3-LO-HH, 3-LP-NM, 3-MP-CC3, 3-LO-TG, 3-MO-FP4, 3-LP-NM
Geng, Haifeng	2-EP-SDP	Grinenko, Vadim	2-MO-FT
Geng, Jianzhao	3-LP-HM	Gromoll, Dirk	2-LP-CO
Geng, Xin	3-MP-CC3	Große, Veit	1-MO-SCC, 1-MP-CC1, 1-LO-SFC, 2-MP-CC2
Geng, Yingsan	1-LO-SFC, 2-LP-CO, 3-MP-M01	Grovener, Chris	1-MO-BK1, 1-MP-BI, 1-MP-CC1, 2-MP-NB, 2-MP-BK2, 3-MP-FP5
Geng, Yue	1-EP-EA, 2-EP-SDP	Grundmann, Joern	2-LO-EA, 2-LO-RM
Gentini, Luca	1-LO-AM1		
Gerbaldo, Roberto	2-EP-SDP, 2-MO-FT		

Guan, Mingzhi	3-LP-HM, 3-MP-CC3, 3-LP-HM	Hasan, Noor	1-EP-JJ
Guanjie, Liu	1-LP-PC	Hasan, Nusair	1-LP-AM2
Guo, Chen	3-MP-MG	Hasegawa, Daiki	3-EP-SQ
Guo, Lingzhen	2-EO-QT	Hashimoto, Atsushi	2-LP-MR
Guo, Qiang	2-MP-NB	Hashimoto, Satoru	2-EP-SDP
Guo, Xueyi	2-EO-QT	Hashizume, Hideyoshi	1-LO-SFC, 1-LP-FM, 1-MP-SPR, 2-MP-CC2, 3-MP-FP5
Guo, Zhengshan	3-EP-SQ, 3-MP-MG	Häßler, Wolfgang	3-MP-MG, 3-MO-BM
Guo, Zichuan	1-LP-FM	Hata, Satoshi	1-MP-SPR, 2-MO-FT
Gupta, Deepnarayan	2-EP-DE2	Hatano, Takafumi	2-MO-FT, 1-EP-EA
Gupta, Ramesh	1-LO-AM1	Hato, Tsunehiro	3-EP-SQ
Gupta, Sandeep	2-EP-DE2	Hatsukade, Yoshimi	3-EP-SQ
Gupta, Vaibhav	3-MP-MD	Hauck, Daniel	1-MO-MP
Gurevich, Alex	3-LO-CA	Haugan, Timothy	3-LP-HC
Gurnham, Charles	2-MP-CC2	Hayakawa, Naoki	1-LO-SFC, 1-LP-FCL
Gustafsson, Torgny	1-EP-JJ	Hayasaka, Ryoichiro	1-MP-SPR, 2-MP-CC2
Guthrie, Andrew	2-EP-TMP, 3-EO-TM	Hayashi, Kanji	3-EP-SQ
Gutierrez Royo, Joffre	2-MO-AP, 2-LP-RF, 3-MO-CU	Hayashi, Mariko	1-MP-FP2
Guzmán, Roger	3-MO-CU, 2-MO-FP1	Hazelton, Drew	1-LO-AM1, 1-MP-FP2, 1-MO-SCC
Gyuráki, Roland	1-LO-SFC, 3-LO-HH	He, Guanze	1-MP-CC1
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<b>H</b>		He, Yusheng	2-EP-TMP, 3-MP-FM
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Ha, Hongsoo	1-MO-CS, 3-MP-CC3	He, Yuxiang	1-MP-SPR
Habelok, Krzysztof	2-LP-SMA	He, Yuxing	2-EP-DE2
Hadfield, Robert H.	1-EP-SP, 2-EP-TMP, 3-EP-QQ, 3-EO-TM	Heath, Robert M.	1-EP-SP
Haese, Kerstin	2-LO-EA	Heideman, Daniel	2-LP-SMA
Hagner, Matthias	1-MO-N3T	Heiduk, Mathias	1-LO-CA
Hahn, Seung Yong	2-LO-OM, 3-LO-HH, 3-LP-HM	Hellmann, Sebastian	2-LP-RF
Haindl, Silvia	3-MO-FW	Hellstrom, Eric E.	1-MO-BK1, 1-MP-BI, 3-MO-BM, 3-LO-HH, 3-MO-BM, 3-MP-FM
Hajiri, Ghazi	1-LP-PC	Hemakumara, Dilini	3-EO-TM
Hamada, Mamoru	2-LP-MR	Henrique Nogueira Dias, Daniel	1-LP-FCL
Hamada, Tsuyoshi	1-MP-CC1, 3-MP-CC3	Herick, Jonas	1-EP-JJ, 2-EP-DE2
Hamaguchi, Shinji	2-LO-FH, 2-LP-CO	Herrmannsdörfer, Thomas	3-LP-HM
Hamajima, Takatoro	3-LP-HC, 3-MP-MG	Hidaka, Mutsuo	2-EO-DA
Hamanaka, Mai	2-LP-MR	Higa, Kazuya	1-MP-EP
Hamilton, Kent	1-LP-PC	Higashii, Yoichi	2-MP-CC2, 1-MP-EP
Hamilton, Michael	1-EP-EA, 2-EP-DE2, 3-MP-MD	Higley, Hugh	1-LO-AM1
Hamoudi, Farid	1-LP-FCL	Higuchi, Kotaro	2-MP-CC2
Hampshire, Damian	1-MO-MP, 1-MP-CU, 2-MO-AP, 2-MP-CC2, 2-MP-NB, 2-MP-FP3, 3-MP-MO1	Hijazi, Hussein	1-EP-JJ
Han, Tae-Hee	2-LP-FCT	Hikosaka, Takuya	3-EP-SQ
Han, Xuetao	2-LP-CO	Hilgenkamp, Hans	3-EO-TS
Hänsch, Jens	1-MO-MP, 1-MP-CU, 1-MP-FP2, 2-MO-CP, 2-MP-CC2, 2-MO-FT, 2-MO-FP1, 3-MP-FP5, 3-MP-FM	Hills, Matthew	2-MP-BK2
Hänle, Sebastian	3-EO-TM	Hilschenz, Ingo	2-LP-MR, 3-EP-SQ
Hansen, Thomas	3-MO-FW	Hilton, Gene C.	2-EO-DA
Hanzawa, Kota	3-MO-FW	Hinoje, Melika	1-MP-EP, 3-LP-NM
Hao, Ling	3-EP-SQ	Hirabayashi, Masayuki	2-LP-MR
Hao, Qiangwang	2-LP-MR, 3-LP-HM	Hiraka, Haruhiko	3-MO-FW
Hara, Shintaro	2-LP-SMA	Hiramatsu, Hidenori	3-MO-FW
Harada, Masahide	2-EO-DA	Hirano, Naoki	3-MP-MG, 3-LP-HC, 2-LP-CO
Harada, Takumu	3-MP-FM	Hirano, Tatsuya	2-MP-BK2
		Hirata, Naoyuki	1-MP-FP2
		Hirata, Wataru	1-MO-SCC
		Hiratsuka, Yoshikatsu	2-LP-CO
		Hironaka, Yuki	2-EP-DE2
		Hirota, Megumi	1-LP-PC
		Hirsch, Holger	1-LO-CA

Hishinuma, Yoshimitsu	2-MP-NB	Huo, Baolei	1-MP-FP2, 2-MP-CC2
Hlásek, Tomáš	1-MP-CU	Hussain, Muhammad Talib	1-LP-FM
Hoffmann, Christian	2-MP-CC2	Hwang, Dennis W.	3-EP-SQ
Hofmann, Michael	1-MP-SPR	Hwang, Seong-min	3-EP-SQ, 2-LP-MR
Holleis, Sigrid	3-MO-CU, 3-MO-FW		
Hollis, Timothy	3-LO-HL		
Holmes, Andrew	1-LO-FL, 1-LP-FM		
Holzapfel, Bernhard	1-MP-FP2, 1-LP-PC, 1-MO-MP, 1-MP-CU, 2-MO-CP, 2-MP-CC2, 2-MP-BK2, 2-MO-FP1, 2-LO-EA, 3-MP-F5		
Homma, Shunsuke	3-LP-LE	Iannone, Gerardo	1-MP-SPR
Honda, Takashi	3-MO-FW	Ibi, Akira	1-MP-SPR, 1-MP-FP2, 1-MP-FP2
Hong, Wei	3-LO-TG	Ichino, Yusuke	3-MP-CC3, 3-MP-F5
Hong, Zhiyong	2-LP-MR	Ichinose, Ataru	1-MP-CC1, 2-MP-CC2, 3-MP-MG, 3-MP-CC3
Hong, Z-Y	1-MO-SCC	Ida, Tetsuya	2-LP-SMA, 2-MP-BK2
Hopkins, Peter	2-EO-DE1, 2-EP-TMP, 3-EO-FA	Ida, Kazumasa	1-EP-EA, 2-MO-FT
Hopkins, Simon C.	1-MO-N3T, 1-LP-AM2, 2-MO-AP, 2-MP-NB, 3-MP-MG, 3-MO-BM	Iijima, Yasuhiro	1-MO-SCC
Horide, Tomoya	2-MO-CP, 2-MO-FP1	Imura, Soshi	3-MO-FW
Horii, Shigeru	1-MP-CC1, 1-MP-CU, 2-MP-CC2, 3-MP-MG, 3-MP-CC3	Iizawa, Yuki	2-EO-DA
Horikawa, Junsei	2-EP-SDP	Ikeda, Kazutaka	3-MO-FW
Hornak, Lawrence	2-EP-TMP	Ikuta, Hiroshi	1-EP-EA, 2-MO-FT
Hornig, Hering-Er	3-EP-SQ	Iliffe, William	1-MP-CC1, 3-MP-F5
Hoshi, Haruki	2-EP-TMP	Ilin, Konstantin	1-EO-NW, 2-EP-SDP
Hoshino, Masayuki	3-LP-HC, 3-MP-MG	Ilyasov, Roman	2-LP-SMA
Hosono, Hideo	3-MO-FW	Imai, Motoharu	3-MO-FW
Hossain, Mahmud	3-LP-LE	Imai, Shota	3-MP-FM
Hossain, MD Shahriar	3-LP-HC	Inagaki, Zenta	2-LP-MR
Hossain, S. Imam	3-MO-BM, 3-LO-HH	Inatani, Yoshihumi	2-LP-SMA
Hou, Xintong	1-EP-SP	Inoue, Masumi	1-EP-EA
Houbart, Michel	2-MP-BK2	Inoue, Seiya	1-MP-CC1, 3-MP-CC3
Hu, Lei	1-LO-SFC	Inoue, Tatsuya	2-LP-MR
Hu, Peng	1-EP-SP	Insinga, Andrea R.	1-MO-CS
Hu, Xinbo	3-LO-HH	Ionescu, Marinela Alina	2-MP-FP3
Hu, Yanlan	1-LO-FL	Ireland, Jane	2-EP-DE2
Hua, Tao	2-EP-SDP, 2-EP-TMP	Irie, Kotaro	2-EP-TMP
Huang, Chenguang	3-MP-M01	Isa, Fabio	3-MP-MD
Huang, Guanbin	1-LP-FCL	Isaacs-Smith, Tamara	3-MP-MD
Huang, Han-Sheng	3-EP-SQ	Ishida, Shigeuyuki	3-MO-FP4, 3-MP-FM, 3-MO-FW, 3-EO-TM
Huang, Hao-Wei	3-EP-SQ	Ishida, Takekazu	2-EO-DA
Huang, He	1-MO-MP, 3-MP-FM	Ishihara, Atsushi	3-MP-MG, 1-LP-PC
Huang, J.	1-EP-SP	Ishii, Hirotaka	1-MP-FP2
Huang, Kai Yuan (Danny)	1-MP-CU, 1-MO-BK1, 1-MO-MP, 1-MP-EP, 2-MP-BK2	Ishiyama, Atsushi	2-LP-MR, 3-LP-LE, 3-LP-HC
Huang, Kai-Weng	3-EP-SQ	Iso, Kosei	1-MO-MP
Huang, Xiaolei	3-EP-SQ	Isojima, Shigeki	1-LP-FCL, 2-LP-FCT
Huang, Yibing	1-MP-BI	Itagaki, Kohki	3-EP-SQ
Huang, Zhen	2-LP-SMA	Ito, Satoshi	1-LO-SFC, 1-LP-FM, 1-MP-SPR, 2-MP-CC2, 3-MP-FPS
Huber, Felix	3-MP-M01	Ito, Toshinobu	3-LO-HH
Huh, Jeong-Uk	1-MO-SCC	Iuppa, Roberto	1-LP-AM2
Hühne, Ruben	1-MP-CC1, 1-MP-FP2, 2-MO-FT, 3-MP-FM, 3-LP-LE	Iuzzolino, Ricardo	2-EP-DE2
Huhtinen, Hannu	1-MP-CU, 1-MP-CC1	Ivan, Ion	3-MP-FPS
Huijuan, Chen	1-LP-PC	Ivanov, Nickolay	2-LO-RM, 2-LP-SMA
Hulbert, Jeff	1-LP-AM2	Iwai, Sadanori	3-LO-HH
		Iwakuma, Masataka	1-MP-SPR, 2-LP-FCT, 2-LP-SMA
		Iwami, Yoshiiki	2-LP-SMA
		Iwamoto, Akifumi	2-LO-FH

Iwanaka, Taku	3-MP-MG
Iyo, Akira	3-MO-FW, 3-MP-FM, 3-MO-FP4
Izumi, Mitsu	2-MP-BK2, 2-LP-SMA
Izumi, Tero	2-LP-SMA
Izumi, Teruo	1-MP-FP2, 1-MP-SPR, 2-LP-FCT, 2-LP-SMA

**J**

Jackman, Kyle	1-EP-EA, 3-EP-SQ
Jackson, Koran	1-EP-SP
Janeke, Charles E	2-LP-CO
Jang, YoongSeo	1-LP-PC
Jankovský, Ondřej	1-MP-CU
Janosek, Michal	3-EP-SQ
Jareño, Julia	1-MP-CU, 1-MP-FP2, 2-MO-FP1, 3-MO-CU
Jaroszynski, Jan	2-MO-FT
Jarvis, Alan Lawrence Leigh	2-MP-BK2
Jellyman, Erik	2-EP-TMP, 3-EO-TM
Jeon, Ju Heum	3-MP-MG
Jeon, Youngmu	1-LP-FM
Jeong, Hyun Gi	3-MP-CC3
Jesorka, Aldo	1-EO-AJ
Jha, Alok	2-MO-CP
Ji, Yu	3-LP-LE
Jia, Xiaoqing	2-EP-DE2
Jiang, Guangyu	1-MO-SCC
Jiang, Jianyi	1-MP-BI, 3-MO-BM, 3-LO-HH, 3-MO-BM
Jiang, Jinpeng	2-LP-CO
Jiang, Junjie	2-LP-MR
Jiang, Xin	2-MP-FP3
Jiang, Zhenan	1-LP-PC, 1-MO-MP, 2-LO-RM, 2-MP-CC2, 3-LP-NM, 3-MP-FP5
Jiangqiang, Feng	3-MP-FM
Jiao, Xiaoqing	1-EP-SP
Jin, Biao-Bing	1-EP-EA
Jin, Huan	1-LP-FM, 2-LO-FH
Jin, Hui	1-LP-PC
Jin, Jin	1-EP-SP
Jin, Yirong	2-EO-QT
Jin, Zhijian	2-LP-FCT
Jin, Z-J	1-MO-SCC
Jixing, Liu	3-MP-FM
Jo, Young-Sik	3-LP-HC, 3-MP-FP5
Johansson, Christer	1-EO-AJ
Johnston, Taylor	2-EP-TMP
Jones, Antony	1-EP-EA, 1-MP-FP2
Joyce, Hannah J.	1-EO-AJ
Juliao, Andre	3-MO-BM
Junaid, Muhammad	2-LP-CO
Jung, Alexandra	3-MP-CC3
Junginger, Tobias	1-MP-SPR
Juster, François-Paul	1-LP-AM2

**K**

Kabasawa, Moriki	3-EP-SQ
Kafanov, Sergey	2-EP-TMP, 3-EO-TM
Kagerbauer, Daniel	3-MO-FW, 3-MO-FP4
Kails, Kevin	2-LP-FCT, 2-LP-SMA
Kajikawa, Kazuhiko	3-LP-NM
Kajitani, Hideki	3-MO-FW
Kakeya, Itsuhiro	1-EP-JJ
Kakimoto, Kazuomi	1-MO-SCC
Kalabolukhov, Alexei	1-EO-AJ, 3-EO-SNQ
Kalsi, Swarn	1-LP-PC
Kamada, Yoshinori	1-MP-FP2
Kametani, Fumitake	3-MO-BM, 3-MP-FM, 1-MO-BK1, 1-MP-BI
Kamiya, Tomohiro	3-EP-SQ
Kanazawa, Shintetsu	2-MP-CC2
Kaneko, Yasuhito	3-LP-LE
Kanemaru, Ryota	2-LP-SMA
Kang, Lin	2-EP-DE2
Kang, Rui	2-LO-FH
Kang, Seong Yeol	1-LP-PC
Kantarbar, Viktor	1-MP-CU, 3-LO-TG
Kapek, Jakub	2-LP-SMA, 3-LP-NM
Kapolka, Milan	1-MO-BK1, 3-LP-NM
Karimi, Bayan	3-EO-FA
Karpov, Sergey	1-LP-AM2
Karpov, Victor	1-LO-CA
Karrer, Max	3-EP-SQ
Kasa, Shannon	3-EO-TS
Kasaei, Leila	1-EP-JJ
Kashcheev, Andrey	1-LO-CA
Kashiwagi, Hayato	1-MP-CU
Kashtanov, Evgeniy	1-LP-AM2
Katam, Naveen	2-EP-DE2
Katase, Takayoshi	3-MO-FW
Kato, Masaru	3-MP-MD
Kato, Takeharu	2-MP-CC2, 1-MP-FP2
Kawagoe, Akifumi	2-LO-FH, 2-LP-CO, 2-LP-SMA
Kawakami, Akira	2-EP-SDP
Kawanami, Junya	3-MP-FP5
Kawasaki, Goki	2-LP-FCT
Kawashima, Kenji	3-MO-FW, 3-MP-FM
Ke, Fei	2-EP-DE2
Ke, Zhihao	3-LP-LE
Keenan, Shane T.	1-EO-AJ
Kelleher, Joe	1-MP-SPR
Kelly, Michael J.	1-EO-AJ
Kempf, Sebastian	1-EP-JJ, 3-EP-SQ, 3-EO-SNQ
Kennedy, Oscar	3-EO-FA, 3-EO-SNQ
Kenny, Lee	1-EP-SP
Kermorvant, Julien	1-EO-AJ
Khabipov, Marat	2-EP-TMP, 3-EO-TM
Khan, Mukarram Zaman	1-MP-CC1, 2-MP-CC2, 3-MP-CC3
Khayyat, Maha	2-MP-BK2

Khedr, Moanis	1-LP-FCL	Kobayashi, Hiroaki	2-LP-SMA
Khene, Samir	3-MP-FP5	Kobayashi, Kazuki	3-EP-SQ
Kieler, Oliver	1-EP-JJ, 2-EP-DE2	Kobayashi, Yusuke	1-LP-PC
Kii, Toshiteru	2-LP-RF	Kobayashi, Yuiga	3-MO-FW
Kikuchi, Akihiro	2-MP-NB	Koblischka, Michael	3-LP-BM, 2-MP-FP3, 3-LP-HC
Kim, Changsoon	1-LP-FCL	Koblischka-Venева, Anjela	3-LP-HC, 2-MP-FP3
Kim, Chul	1-LO-CA, 1-LP-PC	Kodama, Motomune	2-LP-SMA, 3-MO-BM
Kim, Eung-zu	2-MP-NB	Koenig, Rene	1-MP-CU, 3-LO-TG
Kim, Gwontae	1-MO-CS, 3-MP-CC3	Koizumi, Norikiyo	3-MO-FW
Kim, Heonhwan	2-MP-NB	Koizumi, Tomoaki	2-LP-MR
Kim, Hosup	3-MP-CC3	Kojima, Hiroki	1-LO-SFC, 1-LP-FCL
Kim, Hyung-Wook	3-LP-HC, 3-MP-FP5	Kojima, Kenji M	2-EO-DA
Kim, Jea-Chul	1-LP-FCL	Kölle, Dieter	3-EP-SQ, 3-EO-TM
Kim, Jaemin	3-LP-HM	Kolotinskiy, Nikolay V.	1-EP-JJ, 1-EP-EA, 2-EP-TMP
Kim, Jiman	2-MP-NB	Komagome, Toshihiro	3-MP-MG, 3-LP-HC
Kim, Jin-Mok	3-EP-SQ	Komiya, Masataka	2-LP-SMA
Kim, Jin-Su	1-LP-FCL	Kondo, Keisuke	1-EP-EA, 2-MO-FT
Kim, Jinsub	1-LP-FM	Kondo, Naoki	1-EP-EA
Kim, Jung Ho	3-MP-MG	Kondratowicz-Kucewicz, Beata	2-LP-FCT
Kim, Kiwoong	2-LP-MR, 3-EP-SQ	Kong, Ling-Dong	2-EP-DE2, 1-EP-SP
Kim, Kwang Pyo	1-LP-FM	Kong, Xiaoxiao	2-LP-CO
Kim, Kwanglok	3-LO-HH	Konno, Masayuki	2-LP-SMA, 2-LP-FCT
Kim, Kwangmin	3-LO-HH	Konovalov, Pavel	3-MP-MG
Kim, Seog-Whan	3-LP-HC, 3-MP-FP5	Kopera, L'ubomír	2-LO-OM
Kim, SeokBeom	2-LP-MR, 3-LP-HC	Kopylov, Sergey	1-LP-PC
Kim, Seokho	3-LO-HH	Koresawa, Ryutaro	1-MP-CU
Kim, Tae Hyun	1-EP-EA	Korneev, Alexander	2-EO-DA
Kim, Woo-Seok	3-LP-BM, 1-LP-FCL, 3-LP-HC	Korneeva, Yuliya	2-EO-DA
Kim, Youngjae	3-LO-HH	Korneev, Victor K.	1-EP-EA, 1-EP-JJ, 2-EP-TMP
Kim, Young-ok	1-LP-FM	Kosa, Janos Arpad	1-LP-FCL
Kim, Young-Soon	3-LP-HM	Koshelets, Valery	2-EP-TMP, 3-EO-TM
Kim, Yungil	3-LP-HM	Kotaki, Hiroshi	3-MO-BM
Kimoto, Koji	3-MO-FW	Kotova, Elena	3-MP-MG
Kimura, Fumiko	1-MP-CU	Kottouau, Dustin	1-LO-CA
Kinev, Nickolay	2-EP-TMP	Kováč, Ján	2-LO-EA, 2-LP-SMA, 3-LP-NM
Kimpara, Tetsuro	3-LP-LE	Kováč, Pavol	2-LO-OM, 3-MP-MG
Kirby, Glynn	1-LO-AM1, 1-LP-AM2, 1-LO-AM1, 3-LP-NM, 3-LP-BM	Kovalenko, Alexander	1-LP-AM2
Kirchner, Anke	1-MP-CC1	Kovalev, Konstantin	2-LO-RM, 2-LP-SMA
Kirichek, Oleg	1-MP-SPR	Kovalyuk, Vadim	1-EO-NW
Kirichenko, Dmitri	2-EP-DE2	Kovari, Michael	2-MP-NB
Kislinski, Yulii	3-EO-TS	Koyama, Tomio	2-EO-DA
Kiss, Takanobu	3-LP-NM	Kozlov, Sergey	1-EP-JJ
Kissling, Christoph	2-EP-TMP, 3-EO-TM	Kozub, Sergey	1-LP-AM2
Kitada, Satoshi	2-LP-MR	Kraus, Marco	1-EP-JJ
Kitamura, Naoya	3-MP-MG	Krkotic, Patrick	2-LP-RF, 2-MO-AP, 3-MO-CU
Kitamura, Toshiaki	3-LP-LE	Krop, Dave	3-LP-NM
Kuchi, Masaru	1-LP-PC, 3-MP-FP5, 3-MP-FM	Kroug, Matthias	3-EO-TM
Kizilaslan, Olcay	3-EO-TM	Kruip, Marcel	2-LO-FH, 3-LP-NM
Kleiner, Reinhold	3-EP-SQ, 3-EO-TM	Ku, Myunghwan	3-LP-HM
Klemencic, Georgina	3-MP-MD	Kubatkin, Sergey	2-EO-QT
Klenov, Nikolay	1-EP-JJ	Kudou, Kazuma	2-LP-SMA
Klimenka, Aleksey	1-EP-JJ	Kudymow, Andrej	1-LP-PC, 2-LP-FCT
Kling, Andrea	3-MP-CC3	Kuehn, Lars	2-LO-EA, 2-LO-RM
Knafo, William	3-MO-FW	Kugeler, Oliver	2-MP-FP3
Knoll, Allan	1-MP-FP2	Kujovi, Tomáš	1-MP-EP
Ko, Seok-Cheol	2-LP-FCT	Kulaev, Yurii	1-MP-EP, 3-LP-LE

Kumar, Abhinav	1-MP-EP, 2-MP-CC2	Lee, Ji-Kwang	3-LP-BM, 3-LP-HC
Kumata, Yukio	2-LP-MR	Lee, Peter J.	1-MO-N3T, 2-MP-NB
Kummeth, Peter	2-LO-RM	Lee, Sang-Kil	3-EP-SQ
Kunert, Jan	1-MO-SCC, 3-MP-CC3	Lee, Seok-Ju	1-LP-PC, 1-LP-PC
Kupriyanov, Mikhail	1-EP-JJ	Lee, Seong-Joo	2-LP-MR, 3-EP-SQ
Kurbatov, Pavel	1-MP-EP, 3-LP-LE	Lee, Sergey	1-MP-SPR, 1-MO-SCC, 1-MP-FP2, 2-MO-CP
Kurbatova, Ekaterina	1-MP-EP, 3-LP-LE	Lee, Seyeon	1-LP-FCL, 3-LP-HC, 3-LP-BM
Kursumovic, Ahmed	2-MO-FP1	Lee, Shin-Won	2-LP-FCT
Kuš, Peter	1-MP-SPR	Lee, Su-Yong	1-EP-EA
Kusaka, Kensuke	1-LP-AM2	Lee, Yong-Ho	3-EP-SQ
Kuschenko, Egor	1-MP-EP, 3-LP-LE	Leek, Peter	2-EO-QT
Kusunoki, Toshiaki	3-MP-MG	Legendre, Pierre	2-LP-CO
Kutukcu, Mehmet	3-MP-MG	Lehmann, Alf	2-EP-DE2
Kuwata, Minoru	1-LP-FCL	Lei, Lei	3-LO HH
Kuzmin, Artem	1-EO-NW, 2-EP-SDP	Lei, Ming	1-MP-EP
Kuzmin, Leonid	3-EO-FA	Lei, Wuyang	3-LO-TG
Kuznetsov, Gennadiy	2-LO-RM, 2-LP-SMA	Leith, Stewart	2-MP-FP3
Kvitkovic, Jozef	3-LP-HC	Lemaître, Yves	1-EO-AJ
Kwok, Wai-Kwong	3-MP-FM	Leo, Antonio	3-MO-FP4, 3-EP-SQ
Kwon, Hyukchan	3-EP-SQ	Lepéhin, Vladimir	3-LP-BM
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L		Leppäkangas, Juhu	2-EO-QT
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La Barbera, Aurelio	3-MP-FM	Lesaint, Olivier	2-LP-CO
Lackner, Friedrich	1-MO-N3T	Lessmann, Marc	2-LO-EA
Lacroix, Christian	1-LO-SFC, 2-MO-CP, 3-MO-FP4	Lesueur, Jérôme	1-EO-AJ, 1-EP-JJ, 1-EP-SP
Lai, May Hsim	1-MP-FP2	Lévêque, Jean	1-LP-FCL, 2-LP-SMA, 2-LO-EA, 3-LP-NM
Lakrimi, M'hamed	2-MP-NB	Leveratto, Alessandro	3-MO-BM, 3-MO-CU
Lalitha, Lakshmi	1-LP-AM2	Levitin, Jeremy	3-LO-HH
Lam, Simon KH	1-MP-FP2, 1-EP-EA, 3-MP-MD	Levochkina, Anna Yu.	1-EP-JJ
Lan, Tian	3-LP-BM, 3-LP-HC	Lewandowska, Monika	1-LP-FM
Lange, Christian	1-LO-CA	Lewis, Chris	3-EP-SQ, 1-EO-AJ
Langer, Marco	3-MP-FM	Li, Chao	2-LP-FCT, 3-LP-HM
Langtry, Tony	2-LO-FH	Li, Chengshan	3-MP-MG
Lao, Mayraluna	2-MO-CP	Li, Chunguang	2-EP-TMP
Larbaletier, David C.	1-MP-BI, 1-MO-N3T, 1-MO-BK1, 2-MO-AP, 3-MO-BM, 3-LO-HH, 3-MP-FM	Li, Guanqun	2-EP-DE2
Lasek, Paweł	2-LP-SMA	Li, Guoqiang	2-EP-TMP
Laviano, Francesco	2-EP-SDP, 2-MO-FT, 3-MP-MG	Li, H.	1-EP-SP
Lazar, Jeina Y.	3-MP-MD, 1-EO-AJ	Li, Haitao	3-LO-TG, 3-LP-LE
Le Roux, Paul	2-EP-DE2	Li, Hao	1-EP-SP, 1-EO-NW
le Sueur, Hélène	3-EO-TM	Li, Hong	2-EP-TMP
Le, Dinh Vuong	1-LP-PC	Li, Honghu	2-EP-SDP
Leboeuf, David	1-MO-BK1	Li, Hongxu	2-LP-CO
Leclerc, Sébastien	1-MP-EP	Li, Jianfeng	2-MP-NB, 2-LP-MR, 2-LP-FCT
Lecrevisse, Thibault	3-LO-HH	Li, Jin	2-LP-CO
Lee, Aaron	1-EO-AJ	Li, Jipeng	3-LO-TG
Lee, Chulhyu	1-LO-CA	Li, Junjun	1-LP-FM
Lee, Dong Gun	3-MP-MG	Li, Mengjun	1-EP-JJ
Lee, Hunju	3-LP-HM	Li, Ming	3-LO-NM
Lee, Hyeong-Jin	1-LP-FCL	Li, Pei-Zhan	1-EP-EA, 2-EP-SDP
Lee, Hyunjung	1-LP-FM	Li, Pingyuan	2-MP-NB
Lee, Jae-Hun	1-MO-CS, 3-LP-HM	Li, Qiujun	1-LP-FCL, 1-LP-PC
Lee, Jaein	1-LP-FCL	Li, Quan	1-LP-PC, 2-LP-MR, 2-LP-SMA, 2-LP-FCT, 2-LP-SMA, 2-MP-CC2, 3-LO-NM, 3-LP-LE
		Li, Shuo	2-LO-EA, 2-LP-SMA
		Li, Yanxing	3-LO-TG

Li, Yongchao	2-EP-TMP	Lu, Yapeng	2-EP-TMP
Li, Yongqiang	3-EP-SQ	Lubin, Thierry	2-LO-EA
Li, Zhonglei	2-LP-CO	Lucci, Massimiliano	3-EP-SQ
Li, Zhuyong	3-LO-TG, 2-LP-FCT, 2-LP-MR	Lucignano, Pracolo	1-EP-JJ, 2-EO-QT, 3-EO-TS
Li, Ziliang	2-MO-FP1	Lukyanov, Pavel	2-MP-NB
Li, Tengteng	1-MP-EP, 3-MP-FP5	Lundeman, Jesper H.	1-MO-CS
Liakopoulou, Akrivi	1-LP-AM2	Luo, Wenhui	2-EO-DE1
Liang, Hucheng	2-LP-CO	Lux, Hanni	1-LP-FM
Liang, Yu	1-LP-AM2	Lv, Chaolin	1-EP-SP
Liao, Shu-Hsien	3-EP-SQ	Lv, Yangyang	3-EO-TM
Liao, Yu-Ting	3-EP-SQ	Lv, Yue	1-MP-SPR
Liebmann, Mirko	1-MP-CU, 3-LO-TG	Lynn, Jeffrey	3-MP-MD
Lim, Sung-Hun	1-LP-FCL, 2-LP-FCT	Lyu, Yue	2-EP-SDP
Limon, Shah Alam	1-MO-BK1		
Lin, Jianxin	3-EP-SQ		
Lin, Liangzhen	1-LP-FCL, 1-LP-PC		
Linden, Yatir	1-MP-CC1, 3-MP-FP5		
Lindstrom, Tobias	2-EO-QT		
Linek, Julian	3-EP-SQ	Ma, Guanghui	1-LP-FM
Linghu, Kehuan	3-EP-SQ	Ma, Hongjun	3-LO-HH, 2-LP-FCT
Lisitskiy, Mikhail	3-EP-SQ	Ma, Jun	2-LP-FCT, 3-LP-HM
Liu, Boliang	2-EP-SDP	Ma, Pengcheng	1-EO-AJ
Liu, Chenglian	1-LP-AM2	Ma, Tao	1-LO-SFC
Liu, Dong	2-EP-SDP	Ma, Wenbin	3-LP-BM, 3-LO-HL, 3-LP-HM
Liu, Donghui	3-LP-HM	Ma, Yanwei	1-MO-MP, 2-XO-PL1, 3-MP-FM
Liu, Fang	2-MP-FP3, 3-MP-CC3, 2-LP-FCT, 3-LO-HH	Ma, Yuanyuan	1-LP-FM, 2-LP-MR
Liu, Huajun	2-MP-FP3, 3-MP-CC3, 2-LP-FCT, 3-LO-HH	Machi, Takato	1-MP-SPR
Liu, Jianhua	3-LO-HL, 3-LP-HM	Machura, Philip	2-LP-SMA, 2-LP-FCT
Liu, Jianwei	2-MP-NB	Maciejewski, Michal	1-LP-AM2, 1-LO-FL, 1-LP-FM
Liu, Lian	2-MP-CC2, 1-MP-FP2	Maeda, Chihiro	2-LP-FCT
Liu, Ruijing	2-MP-CC2	Maeda, Hideaki	2-LP-MR
Liu, Shifa	3-MP-FM	Maeda, Keiichiro	1-EP-JJ
Liu, Xianghong	2-MP-NB	Maeda, Minoru	3-MP-MG
Liu, Xiaochuan	1-LP-FM	Maeda, Toshihiko	1-MP-CU
Liu, Xiaogang	1-LP-FM	Maezawa, Masaaki	1-EP-JJ
Liu, Xufeng	1-LO-FL, 1-LP-FM	Magrassi, Daniele	3-MP-MG
Liu, Yanchao	3-MP-FP5	Majoros, Milan	2-LP-MR
Liu, Yingzhen	3-LO-TG, 2-LO-EA	Makarenko, Marina	3-LP-BM
Liu, Zhaoxin	3-LP-LE	Makida, Yasuhiro	3-LP-HC, 3-MP-MG
Liu, Zhiyuan	1-LO-SFC, 2-LP-CO, 3-MP-MO1	Malagoli, Andrea	3-MO-CU, 3-MO-BM
Llobart, Nuria	3-EO-TM	Malmivirta, Mika	1-MP-FP2
Löffler, Stefan	2-MP-NB	Maltsev, Eugeny	3-MP-FM
Logvenov, Gennady	3-EO-TS	Malyshev, Oleg B	1-MP-SPR, 2-MP-FP3
Lojka, Michal	1-MP-CU	Mancini, Antonella	1-MP-FP2, 1-MP-CU, 1-MP-SPR, 2-MO-FP1, 3-MP-FP5
Lombardi, Floriana	3-EO-SNQ, 1-EO-NW	Mandal, Soumen	3-MP-MD
Lomonova, Elena	3-LP-NM	Mankevich, Alexey	1-MO-SCC, 2-MO-CP
Long, George	3-EP-SQ	Manova, Nadejda	2-EO-DA
Long, Nicholas	2-LO-OM	Mao, Zhehua	1-MP-EP
López, Ada	1-MP-CU	Marande, Pierre-Louis	1-MP-EP
López-Domínguez, Pedro	2-MO-FP1	Marcilhac, Bruno	1-EO-AJ
Loria, Federico	3-MO-BM, 3-MP-MG	Margesin, Benno	2-EP-SDP
Los, Anton	1-MP-FP2	Markelov, Anton	1-MO-SCC, 2-MO-CP
Lu, Hai-Yang-Bo	1-EP-SP, 2-EP-DE2	Marthaler, Michael	2-EO-QT
Lu, Jun	3-LO-HH	Martin, Phil	3-MP-MD
Lu, Kun	1-LO-FL	Martínez, Elena	2-LO-OM, 3-LP-HM
		Martínez, Glenn	1-EO-NW

Martini, Luciano	1-LP-FCL	Mikami, Hikaru	2-EP-SDP
Martins Araujo, Douglas	1-LO-AM1	Mikami, Yukio	2-LP-MR
Martucciello, Nadia	3-EP-SQ	Mikhailov, Mikhail	2-EO-DA
Martynova, Svetlana	1-MO-SCC	Miki, Shige hito	1-EP-SP, 1-EO-NW
Masataka, Iwakuma	1-LO-CA	Mikulášová, Edita	3-MP-CC3
Masi, Andrea	1-MP-SPR, 2-MO-FP1, 3-MP-FM, 3-MP-FM	Militello, Benedetto	3-EP-SQ
Massalimov, Burkhan	2-MO-CP	Miller, Evan	3-MO-BM
Massarotti, Davide	1-EP-JJ, 2-EO-QT, 3-EO-TS, 3-EP-QQ	Miller, George	3-LO-HH
Masuda, Takato	1-LP-PC, 1-LO-CA	Miller, Samuel	1-LP-AM2
Mataira, Ratu	2-LP-SMA, 3-MP-MO1	Mima, Satoru	3-EO-TM
Matera, Davide	1-MO-N3T, 1-MO-BK1	Mimbu, Masataka	1-LP-FCL
Mates, John A. B.	2-EO-DA	Mimura, Masanao	1-LP-PC
Matras, Maxime	3-MO-BM, 3-LP-NM	Mimura, Tomoo	1-LP-PC, 1-LO-CA
Matsuda, Tetsuya	2-LP-MR	Minamino, Tadahiko	1-LO-CA
Matsuishi, Satoru	3-MO-FW	Mineev, Nikolay	1-MO-MP, 1-MO-BK1, 2-LP-CO, 2-LO-RM, 2-LP-SMA
Matsumoto, Akiyoshi	1-MP-FP2, 3-MO-BM	Miryala, Muralidhar	1-MP-CU, 3-MO-BM
Matsumoto, Junpei	3-MO-FW	Misaizu, Hidenori	2-MO-CP
Matsumoto, Kaname	2-MO-FP1, 3-MP-CC3, 2-MO-CP	Mishev, Ventsislav	3-MO-FP4
Matsumoto, Ryo	3-MP-MD	Mišík, Jozef	2-LP-FCT, 3-MP-CC3
Matsumoto, Taito	2-LP-SMA	Mitchell, Emma E.	3-EP-SQ, 3-MP-MD, 1-EO-AJ
Matsumoto, Takuya	2-MO-FT	Mitchell, Neil	1-LO-FL
Matsunawa, Ryo	3-EP-SQ	Mitchell, Roger	1-LP-FM
Matsushita, Teruo	1-LP-PC, 3-MP-FP5, 3-MP-FM	Mito, Toshiyuki	3-LP-HC, 2-LP-CO, 2-LO-FH
Matsuyama, Shigeo	3-MP-FP5	Mitsubori, Hitoshi	2-LP-MR
Matthews, Guillaume	3-LP-BM, 2-MP-BK2, 1-MO-BK1	Miura, Hideaki	2-LP-MR
Mawatari, Yasunori	1-MP-EP, 1-EP-EA, 2-MP-CC2	Miura, Masashi	1-MP-FP2, 3-MP-FM, 3-MP-FP5
Mayer, Joachim	1-MP-CU	Miura, Shun	1-MP-SPR, 2-LP-FCT, 2-LP-SMA
Mazet, Jacky	1-LO-AM1	Miwa, Misako	3-MP-FP5
Mcintosh, Simon	1-LO-FL, 1-LP-FM	Miyachi, Yugo	2-MP-CC2
Mean, Byoungjean	3-LP-HM	Miyagi, Daisuke	3-MP-MG, 3-LP-HC
Medvids, Arturs	2-MP-FP3	Miyajima, Shigeyuki	1-EO-NW, 2-EO-DA
Meier, William	3-MO-FW	Miyata, Kenji	1-MP-FP2
Melaccio, Umberto	3-LP-LE	Miyawaki, Daisuke	3-MO-FW
Melbourne, Thomas	1-EP-JJ	Miyazaki, Akira	1-MP-EP
Meledin, Alexander	1-MP-CU, 2-MO-FP1	Miyazaki, Hiroshi	3-LO-HH
Melhem, Ziad	1-MP-BI, 3-LP-HM	Miyazawa, Junichi	1-LP-FM
Melo, Rodrigo	2-EP-DE2	Mochizuki, Sora	2-MP-NB
Menana, Hocine	3-MP-MO1, 3-LP-NM	Mocuta, Cristian	3-MO-CU
Mentink, Matthias	1-LO-AM1, 2-MP-NB	Moeller, Dirk	2-LO-EA
Merenkov, Alexey	2-EO-DA	Moldenhauer, Stefan	2-LO-EA
Mérida-Toledo, Uriel	3-MP-FM	Molodyk, Alexander	1-MP-CC1, 1-MP-FP2, 1-MO-SCC, 2-MO-CP
Merlo, Vittorio	3-EP-SQ	Monteuuis, Arnaud	2-MP-NB
Messina, Antonino	3-EP-SQ	Moon, SeungHyun	1-MO-CS, 3-LP-HM
Messina, Giuseppe	1-LO-FL	Morandi, Antonio	3-LP-LE
Mestdagh, Jan	3-MP-MG	Morawski, Andrzej	3-MP-MG, 3-MP-FM, 3-MO-BM
Mestres, Narcis	3-MO-CU	Morega, Alexandru Mihail	3-LP-HM
Meunier, Gérard	3-LP-NM	Morega, Mihaela	3-LP-HM
Meuter, Florian	1-LP-AM2	Mori, Yuji	1-LO-SFC
Meyer, Christian	1-MO-N3T	Morici, Luigi	1-LO-FL
Meyer, Sven	2-MO-FT, 3-MP-FM	Morie, Takaaki	2-LP-MR
Mezzena, Renato	2-EP-SDP	Morikawa, Eisuke	2-LP-MR
Miano, Alessandro	2-EQ-QT, 3-EP-QQ	Morimura, Toshiya	1-LO-CA
Miao, Wei	1-EP-EA	Morita, Yusuke	2-LP-MR
Micahel Martins Rocha, Luís	2-LP-FCT	Moros, Alice	2-MP-NB, 3-MO-CU
Michels, Matthias	1-MO-N3T	Morozov, Dmitry V.	1-EP-SP, 3-EQ-TM

Morton, John JL	3-EO-SNQ	Namburi, Devendra Kumar	1-MP-CU, 1-MO-BK1, 1-MO-MP,
Mos, Ramona Bianca	1-MP-CU, 1-MP-FP2, 3-MP-FP5, 3-MO-CU		2-MP-BK2
Moša, Marek	2-LP-FCT, 2-MO-CP	Napoli, Anna	3-EP-SQ
Moseley, Dominic	1-MP-CU, 3-LP-HM, 3-LP-BM	Napolitano, Andrea	2-EP-SDP
Mosiadz, Mariusz	1-MO-SCC	Napolskii, Kirill	1-EP-JJ
Moško, Martin	1-MP-SPR	Naruo, Yoshihiro	2-LP-SMA
Mosri, Marco	1-MO-SCC	Naruse, Masato	3-EP-SQ
Motoki, Takanori	3-MO-BM	Nast, Rainer	3-MP-CC3
Mousavi, Tayebeh	2-MP-NB, 1-MP-BI	Nasti, Umberto	1-EP-SP, 2-EP-TMP, 3-EP-QQ
Mueller, Anke-Susanne	2-MP-NB	Nasui, Mircea	1-MP-CU, 1-EP-EA, 1-MP-FP2, 3-MO-CU
Mueller, Markus	2-LP-SMA, 3-LP-NM	Natori, Asuka	1-EP-JJ
Mukhanov, Oleg	3-EP-QQ	Naumov, Andrey	3-LP-BM
Mukoyama, Shinichi	1-LP-PC	Naumov, Andrii	2-EO-DA
Mulder, Tim	1-LO-AM1, 2-LO-FH	Navarro, Rafael	2-LO-OM, 3-LP-HM
Müller, Benedikt	3-EP-SQ	Necpal, Martin	2-LP-FCT, 3-MP-CC3
Müller, Karl	1-EO-AJ, 3-EP-SQ	Negishi, Shun	2-EP-SDP
Mundet, Bernat	1-MP-CU, 2-MO-FP1	Nekrasova, Julia	2-LO-RM
Murakami, Masato	1-MP-CU, 3-LP-BM, 3-MO-BM, 3-LP-HC	Nemangwele, Phulufheho	2-LP-RF
Murakoshi, Yuya	2-MP-NB	Nes, Thomas	1-LO-AM1
Muralidhar, Miryala	2-MP-FP3	Neupert, Holger	2-MO-AP
Murataj, Irdi	3-MP-MD	Nguyen, Hai	1-LP-AM2
Murta-Pina, João	2-LP-FCT	Ni, Dongsheng	1-LP-AM2
Murtomaeki, Jaakko	1-LO-AM1	Nielsch, Kornelius	1-MP-CC1, 2-MO-FT, 3-MP-FM, 3-LP-LE
Murugesan, Vignesh	3-EO-TM	Nielsen, Pernille H.	1-MO-CS
Musso, Andrea	1-MP-SPR	Nigro, Angela	3-MO-FP4, 3-EP-SQ
Mustafa, Ashraf	1-MP-BI	Nijhus, Arend	3-MP-MG, 3-LP-HC
Muzzi, Luigi	1-LO-FL	Nikulshin, Yasha	3-LP-LE
Myoren, Hiroaki	3-EP-SQ	Nilsson, Mats	1-EO-AJ
Myronov, Maksym	1-MP-SPR	Nishida, Akihiko	2-MP-FP3
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<b>N</b>		Nishijima, Gen	1-LP-PC, 1-MP-FP2, 3-MO-BM
Na, JinBae	1-LP-PC	Nishikawa, Daisuke	3-LP-HC
Na, Sinhye	2-MP-NB	Nishimura, Jun	1-MP-FP2
Nader, Adel	2-MP-FP3	Nishimura, Kazuma	2-EO-DA
Nagoi, Setsura	2-LP-CO	Nishio, Taichiro	3-MP-FM
Nagamoto, Naohiro	2-LP-CO	Niu, Minghui	2-EP-DE2
Nagaya, Shigeo	3-LP-HC, 3-LP-LE, 2-LP-MR	Niu, Xiaojun	2-LP-SMA
Naik, Pavani Kumar	3-LP-HC	No, Hyunwoo	3-MP-CC3
Naito, Tomoyuki	2-MP-FP3, 2-MP-BK2, 1-MO-BK1, 3-LP-BM	Noe, Mathias	1-MP-CC1, 1-LP-FCL, 1-LO-SFC, 2-LP-FCT, 2-LP-SMA
Najem, Ahmad	1-MP-BI	Noguchi, So	2-LP-MR, 3-LO-HH
Nakajima, Kensuke	2-EP-SDP, 2-EP-TMP, 3-MP-MG, 3-LP-HC	Noguchi, Takashi	3-EO-TM
Nakajima, Masamichi	3-MO-FP4	Noh, HyunWoo	1-MO-CS
Nakamura, Miyuki	1-MP-FP2	Noll-Baumann, Sonja	1-MO-SCC
Nakamura, Taisei	1-MP-CU	Nomura, Kota	2-LP-MR
Nakamura, Takashi	1-MP-EP, 2-LP-MR	Nomura, Shunji	3-LO-HH
Nakaoaka, Koichi	1-MP-FP2	Nonaka, Satoshi	2-LP-SMA
Nakayama, Akiyoshi	1-EP-JJ, 3-EP-SQ	Norowski, Konrad	2-EO-DA
Nakayama, Takeshi	3-MO-BM	Nosov, Alexander	1-LO-CA
Namba, Sora	1-MO-BK1, 1-MO-MP, 3-LP-BM	Nouailhetas, Quentin	3-LP-HC, 2-MP-FP3
		Noudem, Jacques	3-MO-BM
		Novosilova, Daria	2-MP-NB
		Nucciotti, Angelo	2-EP-SDP, 2-EO-DA
		Núñez-Chico, Ana Belén	3-LP-HM

## O

O'Callaghan, Joan 2-MO-AP, 2-LP-RF  
 Obara, Takuya 1-MO-MP  
 Obradors, Xavier 1-MP-CC1, 1-LO-SFC, 1-LP-FCL,  
     1-MP-FP2, 1-MP-CU, 2-MO-FP1,  
     3-MO-CU, 3-MO-FP4, 3-MP-CC3  
 O'Brien, Michael 3-EO-TS  
 O'Brien, Peter 2-LO-RM  
 Obukhov, Sergei 1-MP-SPR  
 Ochiai, Koki 3-LP-LE  
 Oda, Shohe 2-EP-TMP  
 Ogawa, Jun 3-MO-BM  
 Ogino, Hiraku 3-MO-FW, 3-MO-FP4, 3-MP-FM  
 Oguro, Hideyoshi 2-MP-NB  
 Oh, Dong Keun 1-LP-FM  
 Oh, Sangju 1-LP-FM, 3-MP-MOI  
 Oh, Sangsoo 1-MO-CS  
 Oh, Sangwon 3-EP-SQ  
 Oh, Seonghun 3-LP-HM  
 Ohmure, Masato 3-LP-LE  
 Ohsaki, Hiroyuki 2-LP-SMA  
 Ohta, Junya 1-MP-FP2  
 Ohtani, Tekeyoshi 3-EP-SQ  
 Oikawa, Kenichi 2-EO-DA  
 Oka, Tetsuo 1-MP-CU, 1-MP-EP, 3-LP-BM,  
     3-MO-BM  
 Okabe, Kosuke 3-EP-SQ  
 Okada, Tatsunori 1-MP-FP2, 2-MO-CP, 3-LP-NM  
 Okamura, Tetsuji 2-LP-CO  
 Okanishi, Hiroshi 3-MO-FW  
 Okanovic, Miralem 1-MP-SPR  
 Okhapkin, Victor 1-LP-AM2  
 Oki, Hayami 3-MO-BM  
 Okimoto, Danilo 2-MP-FP3  
 Oki, Takayuki 2-EO-DA  
 Okube, Maki 1-MP-FP2  
 Olaya, David 2-EO-DE1  
 Oliveira, Roberto 1-LP-FCL, 2-LP-FCT  
 Oloye, Abiola 1-MP-BI, 3-MO-BM  
 Olyunin, Andrey 1-LP-AM2  
 Omar, Zakiya 2-LO-OM  
 Onji, Taiki 1-LP-PC, 3-LP-HC, 3-MP-MG  
 Ono, Satoshi 2-EP-TMP  
 Onodera, Yuta 2-LO-FH, 2-LP-CO, 3-LP-HC  
 Onoshita, Haruka 2-LP-MR  
 Ookubo, Hiroshi 2-LP-MR  
 Oomen, Marijn Pieter 2-LO-RM, 2-LP-SMA  
 Orchin, Gavin 1-EP-SP  
 Orlanducci, Silvia 1-MP-CU  
 Ortino, Mattia 2-MP-NB, 1-MO-N3T  
 Ortlepp, Thomas 2-EP-DE2  
 Ortwein, Rafal 1-LP-AM2  
 Osipov, Maxim 1-MP-EP, 3-MP-FP5, 3-LP-LE  
 Oslandsbotn, Andreas 2-MP-NB  
 Osofsky, Michael 1-MO-CS, 3-MP-MD

O'Sullivan, James 3-EO-SNQ  
 Oswald, Bernhard 2-LO-EA  
 Oswald, Johannes 2-LO-EA  
 Ota, Keisuke 3-MP-CC3  
 Otake, Shunsuke 2-LP-MR  
 Otani, Chiko 3-EO-TM  
 Otani, Yasumi 3-LO-HH  
 Otin, Ruben 1-LO-FL, 1-LP-FM  
 Otomo, Toshiya 3-MO-FW  
 Otto, Alexander 1-MP-BI, 2-MP-CC2  
 Ovsyannikov, Gennady 3-EO-TS  
 Oxborrow, Mark 3-EP-SQ  
 Oz, Yavuz 1-MP-BI, 3-MO-BM, 3-LO-HH  
 Ozaki, Keisuke 1-MP-CU  
 Ozaki, Koichiro 2-LP-SMA  
 Ozturk, Yavuz 3-LO-HH, 3-LP-HM

## P

Pacheco Aceña, Adrià 1-MP-CC1, 1-MP-CU, 2-MO-FP1,  
     3-MP-CC3  
 Padella, Franco 3-MP-FM  
 Pagano, Sergio 2-EP-SDP, 3-EP-SQ  
 Painter, Thomas 3-LO-HH  
 Pais Da Silva, Helder Filipe 3-LP-NM  
 Pak, Changin 1-MO-BK1, 3-MP-FM  
 Pal, Avradeep 3-EO-TS, 1-EP-JJ, 2-EO-QT  
 Palafox, Luis 1-EP-JJ  
 Palasz, Szymon 2-LP-FCT  
 Palau, Anna 1-MP-FP2, 2-MO-FP1, 3-MO-CU,  
     3-MO-FP4  
 Palmer, Xavier 1-MP-CC1  
 Palmieri, Luca 1-LO-AM1  
 Palonen, Heikki 2-MP-CC2, 1-MP-CC1, 3-MP-CC3  
 Pamidi, Sastry 1-LO-CA, 1-LP-PC, 3-LP-HC  
 Pan, Alexey V 1-MP-FP2, 1-EP-EA  
 Pan, Jiazheng 2-EP-TMP  
 Pan, Xifeng 2-MP-NB  
 Panghotra, Ritika 1-EP-JJ  
 Pankratov, Andrey 3-EO-FA  
 Pantoja, Andres (Olly) 2-LO-RM  
 Pantyrny, Victor 2-MP-NB  
 Pardo, Enric 1-MO-BK1, 2-LO-EA, 2-LP-SMA,  
     3-LO-TG, 3-LP-NM  
 Park, Minwon 1-LO-CA, 1-LP-FCL, 1-LP-PC  
 Parlato, Loredana 3-EP-SQ  
 Pascual Laguna, Alejandro 3-EO-TM  
 Pashkin, Yuri 2-EP-TMP  
 Pasini, Gaetano 1-MP-SPR  
 Pasquet, Raphaël 3-LP-LE  
 Patel, Anup 2-LO-OM, 3-LP-NM  
 Patil, Mohit 1-LP-AM2  
 Patrakov, Evgeny 2-MP-NB  
 Paturi, Petriina 1-MP-CU, 1-MP-FP2, 1-MP-CC1,  
     2-MO-FP1, 2-MP-CC2, 3-MP-CC3

Paudel, Nawaraj	2-MP-NB, 1-MO-N3T	Podlivaev, Alexsey	1-MP-EP
Paul, Jharna	1-EP-SP	Pokrovskii, Sergei	1-MP-EP, 3-LP-LE, 3-MP-FP5
Pedram, Massoud	2-EP-DE2	Polasek, Alexander	2-LP-FCT
Pegrum, Colin	1-EO-AJ, 3-EP-SQ	Polikarpova, Maria	2-MP-NB
Pei, Xiaoze	3-LP-NM, 3-LP-LE	Politi, Sara	1-MP-CU
Peixoto de Abreu, Leonardo Picanço	1-MP-CU	Polyakov, Alexei	3-LP-BM
Pekar íková, Marcela	1-LP-FCL, 2-LP-FCT, 2-MO-CP, 3-MP-CC3	Polyakova, Margaret	1-EO-NW, 2-EO-DA
Pekola, Jukka	3-EO-FA	Polychroniou, Elias	3-EP-SQ
Peng, Nianhua	3-MP-FP5	Pompeo, Nicola	2-MP-FP3, 3-MO-FP4, 3-MP-FP5, 2-MO-FP1, 2-MO-FT
Peng, Sisi	2-LP-SMA	Ponomarov, Semyon	2-MP-FP3
Peng, Wei	1-EP-JJ	Pont, Montse	2-LP-RF, 2-MO-AP
Peng, Xuan	3-MO-BM, 2-MP-NB, 1-MO-N3T	Pop, Cornelia	1-MP-FP2, 3-MO-FP4
Penkin, Vladimir	2-LP-SMA	Pop, Ovidiu	1-EP-EA
Penna Fernandes, David	1-LP-FCL	Popov, Ruslan	1-MP-FP2
Pentimalli, Marzia	3-MP-FM	Popov, Yuri	1-LP-AM2
Pepe, Giovanni Piero	3-EP-QQ, 1-EP-JJ, 2-EO-QT, 3-EP-SQ	Popova, Elena	2-MP-NB
Perel, Eliezer	3-LP-LE	Popovici, Iuliu	3-LP-HM
Pérez, Belén	2-LP-FCT	Portillo, Mauricio	1-LP-AM2
Perez, Francis	2-LP-RF, 2-MO-AP	Potapenko, Mikhail	2-MP-NB
Perez, Juan Carlos	1-LO-AM1	Potter, Jamie A.	3-EO-FA, 3-EP-QQ
Pernice, Wolfram	1-EO-NW	Prance, Jonathan	3-EO-TM
Pervakov, Kirill	2-MO-FT, 3-MP-FM	Pratap, Rudra	2-MO-AP
Pesetski, Aaron	1-EO-AJ	Presotto, Alice	1-MP-SPR, 2-MP-FP3
Pessina, Gianluigi	2-EO-DA	Prestemon, Soren	1-LO-AM1
Pessoa, Aleksander	1-MP-CU	Prestigiacomo, Joseph	3-MP-MD, 1-MO-CS
Petersson, Karl	3-EO-TS	Preuss, Alan	1-LO-CA
Petrich, Maikel	2-EP-TMP	Prigozhin, Leonid	3-MP-MO1
Petrini, Nicolo	1-EP-SP	Prikhna, Tetiana	2-MP-FP3, 3-MO-CU
Petrisor Jr., Traian	1-MP-FP2, 1-EP-EA, 1-MP-CU, 3-MO-CU, 3-MP-FP5	Prin, Herve	1-LP-AM2
Petrov, Alexander	1-LP-PC	Príncipe, Rosario	1-LP-AM2
Petrykin, Valery	1-MO-SCC, 1-MP-FP2, 2-MO-CP	Prioli, Marco	1-LP-AM2
Petrzhik, Andrey	3-EO-TS, 2-MO-CP	Pronto, Anabela	2-LP-FCT
Petsche, Frank	1-EO-AJ	Protheroe, Stephen	2-EP-DE2
Pfeiffer, Christoph	1-EO-AJ, 3-EO-SNQ	Prozorov, Ruslan	2-MO-FT
Pfeiffer, Ken	1-MO-SCC	Prusseit, Werner	1-MO-SCC
Pfeiffer, Stephan	1-MO-N3T, 2-MP-NB, 3-MO-FP4	Przybysz, Anthony	1-EO-AJ
Phang, Sinhoi	2-LO-RM	Przybysz, John	1-EO-AJ
Pietranera, Davide	3-MP-MG	Przysłupski, Piotr	3-MP-FM, 3-MP-MG
Pilgrim, James	1-LP-PC	Puig, Teresa	1-MP-CCI, 1-MP-FP2, 1-LO-SFC, 1-MP-CU, 1-MO-CS, 2-LP-RF, 2-MO-FP1, 2-MO-AP, 3-MO-CU, 3-MO-FP4
Pincot, Francois-Olivier	1-LO-AM1	Puiu, Andrei P.	2-EO-DA, 2-EP-SDP
Pimhangkorn, Sunsanee	1-MP-CU	Pukenas, Aurimas	2-MO-FT
Pino, Flavio	1-MP-CCI, 3-MP-CC3	Purches, Wendy E.	1-EO-AJ, 3-EP-SQ, 3-MP-MD
Pintea, Radu	3-LP-HM	Pushkin, Yuri	3-EO-TM
Pinto, Pedro Costa	2-MO-AP	Putti, Marina	3-MP-MG, 3-MO-CU, 3-MO-BM, 3-MO-FP4, 3-MP-FM, 3-MO-FW
Pinto, Valentina	1-MP-FP2, 1-MP-SPR, 1-MP-CU, 2-MO-FP1, 2-MO-FP1, 3-MP-FM, 3-MP-FP5		
Piperno, Laura	1-MP-CU, 1-MP-FP2, 1-MP-SPR, 2-MO-FP1, 3-MP-FM, 3-MP-FP5		
Pira, Cristian	2-LP-RF, 2-MP-FP3		
Plastun, Alexander	1-LP-AM2		
Plecenik, Andrej	3-MP-MD, 1-MP-SPR		
Plecenik, Tomáš	1-MP-SPR		

## Q

Qi, Zaidong	3-EO-TM
Qin, Jinggang	1-MP-BI, 1-MP-EP, 1-MP-SPR, 1-LP-FM, 2-LP-MR, 2-LP-FCT, 2-LO-FH

Qin, Lang	3-LO-HL, 3-LP-HM
Qin, Xing	2-MP-NB
Qing, Tong	3-EO-TM
Qiu, Longqiang	3-EP-SQ
Qiu, Qingquan	1-LP-FCL, 1-LP-PC
Qiu, Wei	1-EP-EA
Qu, Hongyi	2-LP-MR
Qu, Pei-Yao	2-EP-DE2
Qu, Timing	3-LP-HM, 2-LO-RM
Queraltó, Albert	1-MP-CU, 1-MP-CC1, 3-MP-CC3
Quéval, Loïc	2-LP-SMA, 3-LO-TG
Quintal, João Ricardo	1-MP-CU

**R**

Raginel, Vivien	1-LP-AM2
Raine, Mark	1-MP-CU, 2-MO-AP
Ramaswamy, Vijaykumar	2-EP-TMP
Ramdane, Brahim	3-LP-NM
Rasi, Silvia	2-MO-FP1, 3-MO-CU
Ravaioli, Emmanuele	1-LP-AM2
Razmkhah, Susan	3-EP-SQ, 2-EP-DE2
Readman, Peter	2-MO-AP
Reaume, Marc	1-LP-AM2
Recoba Pawłowski, Eliana	1-EO-AJ
Reintsema, Carl D.	2-EO-DA
Reis, Thomas	3-LO-TG, 2-LP-SMA, 2-LO-EA
Reiser, Mario	1-MP-SPR
Reith, P.	3-EO-TS
Ren, Jie	1-EP-JJ, 2-EP-DE2
Ren, Yong	1-LP-FM
Revín, Leonid	3-EO-FA
Ribani, Pier Luigi	3-LP-LE
Ricart, Susagna	1-MP-CC1, 1-MP-FP2, 2-MO-FP1, 3-MP-CC3, 3-MO-CU, 3-MO-FP4
Ricci, Alessandro Maria	1-LO-AM1, 1-MP-SPR
Richard, Simon	3-MO-FP4
Richter, Daniel	3-EO-SNQ
Richter, Stefan	2-MO-FT
Riedel, Thomas	1-MP-CU, 3-LO-TG
Ries, Rastislav	2-MP-FP3, 3-MP-FP5
Rijckaert, Hannes	1-MP-FP2, 1-MP-CU, 2-MO-FP1
Rikel, Mark O.	1-MP-CU, 1-MP-SPR, 1-MO-SCC, 1-MP-BI, 2-MO-FP1, 3-MP-CC3
Rindfleisch, Matt	3-MO-BM, 2-LP-MR, 1-MO-N3T, 3-MP-FM
Ringsdorf, Bernd	3-MP-CC3
Ritchie, David A.	1-EO-AJ
Riva, Nicolò	2-LP-FCT, 3-MO-FP4
Rivasto, Elmeri	1-MP-CC1, 2-MP-CC2, 3-MP-CC3
Rizzo, Francesco	1-MP-SPR, 1-MP-CU, 1-MP-FP2, 2-MO-FP1, 3-MP-FM, 3-MP-FP5
Rmeid, Sajida	2-MP-BK2
Robert, Bright	3-LP-HC, 2-MP-FP3
Roch, Tomáš	1-MP-SPR, 3-MP-MD

Rochester, Jacob	1-MO-N3T
Rodin, Igor	3-LP-HC
Roditchev, Dmitriy	1-EP-JJ
Rodrigo, Rebecca	3-EP-SQ
Rodrigues Jr., Durval	3-MP-MG
Rogacki, Krzysztof	1-MP-FP2
Romaka, Vitaliy	2-MP-FP3
Romanelli, Gherardo	1-LO-FL
Romanov, Artur	2-MO-AP, 2-LP-RF
Romans, Ed	3-EP-SQ
Romba, Luís	2-LP-FCT
Rondino, Flaminia	1-MP-CU
Rong, Liangjiang	3-EP-SQ
Ronson, Emily	1-EP-SP
Ros, Josep	1-MP-FP2, 2-MO-FP1
Rosen, Peter	3-MP-MD
Rossi, Lucio	1-LO-AM1, 1-LP-AM2, 3-LP-NM, 3-LP-BM

Rostek, Peter	2-LO-EA
Rotzinger, Hannes	3-EP-QQ, 1-EP-EA
Roura, Pere	3-MO-CU, 2-MO-FP1
Roux, Christian	1-LP-AM2
Rozier, Blandine	3-LP-NM
Ru, Yanyun	2-MP-BK2
Ruban, Alexander	1-LP-AM2
Rubanov, Sergey	1-EP-EA
Rudakov, Kirill	2-EP-TMP
Rudnev, Igor	1-MP-EP, 1-EP-EA, 3-LP-LE
Ruffieux, Silvia	1-EO-AJ
Rufoloni, Alessandro	1-MP-SPR, 1-MP-FP2, 2-MO-FP1, 3-MP-FP5, 3-MP-FM
Ruggiero, Berardo	3-EO-SNQ
Ruiz, Harold	2-MP-FP3, 3-LP-HC
Rummel, Thomas	1-LP-FM
Rungger, Ivan	1-EP-JJ
Ruoos, G	3-EO-FA
Rusanov, Denis	2-LO-RM, 2-LP-SMA
Rutt, Alexander	1-MO-CS
Ryabin, Timofey	1-LO-CA
Ryazanov, Valeriy	1-EP-JJ

**S**

Saba, Aisha	3-MO-CU
Sadewasser, Mario	1-MO-SCC
Sahin, Döndü	1-EP-SP
Sahner, Thomas	1-LP-AM2
Sahu, Anubhav	2-EP-DE2
Saito, Atsushi	2-EP-TMP
Saito, Hikaru	2-MO-FT
Saito, Mikihiko	1-MO-MP
Saito, Takahiro	1-LO-CA
Sakai, Naomichi	3-MO-BM
Sakamoto, Daiki	2-LP-FCT
Sakamoto, Ryuhei	2-LP-MR

Sakamoto, Takuya	2-LP-FCT	Seferai, Valentino	2-EP-TMP, 3-EP-QQ
Sakewitz, Clay	1-MO-SCC	Segal, Christopher B.	1-LP-AM2, 2-MP-NB
Sakuma, Keita	1-MP-FP2	Seidel, Paul	1-EP-JJ, 3-EP-QQ
Salina, Gaetano	3-EP-SQ	Seiler, Eugen	2-MP-FP3, 3-MP-FP5
Salm, Cora	1-LP-AM2	Sekiya, Naoto	2-EP-TMP
Saltarelli, Lavinia	1-MP-CC1	Sellers, John	3-MP-MD
Salvoni, Daniela	2-EP-SDP	Selvamanickam, Venkat	1-MO-CS, 2-MO-AP
Samoilenko, Sergey	1-LP-PC, 1-MP-FP2, 1-MO-SCC, 2-MO-CP	Semenov, Alexander	1-EO-NW
Sano, Kyosuke	3-EP-SQ, 1-EP-EA	Semenov, Alexej	1-EO-NW
Sanogawa, Yu	1-MO-MP	Senatore, Carmine	1-LO-AM1, 1-MO-MP, 1-MO-BK1, 1-MO-N3T, 2-MP-NB
Santoni, Antonino	1-MP-CU	Sepehri, Sobhan	1-EO-AJ
Saraf, Amir	3-MO-FP4	Sergeev, Vladimir	2-MP-NB
Sarasola, Xabier	3-LP-BM	Shaanika, Erasmus	2-LP-SMA
Sardella, Edson	2-MP-FP3, 1-MP-SPR	Shadrin, Anton	3-EO-TS
Sarwana, Saad	2-EP-DE2	Shao, Qing	1-LP-FCL
Sasa, Hiromasa	2-LP-FCT, 2-LP-SMA	Shao, Yingyi	1-EP-JJ, 2-EP-DE2
Sasase, Masato	3-MO-FW	Shapovalov, Andrii	1-EP-JJ
Sasayama, Teruyoshi	2-LP-SMA	Shaternik, Volodymyr	1-EP-JJ
Sass, Felipe	2-LP-FCT	Shelly, Connor D	1-EP-JJ
Sato, Shinji	2-LP-MR	Shen, Boyang	2-LP-FCT, 3-LP-HM, 3-LO-HH
Sato, Sotaro	1-LP-FM	Sheng, Chao	1-LO-SFC
Sato, Yutaka S.	1-MP-SPR	Sheng, Jie	2-LP-MR, 2-LP-FCT
Satrapinsky, Leonid	1-MP-SPR	Shengnan, Zhang	3-MP-FM
Satrya, D. C.	3-EO-TS	Shi, Jiangtao	1-MP-CC1
Saunders, Elda	3-EP-SQ	Shi, Jianxin	2-EP-SDP, 2-EP-TMP
Savin, Alexander	2-EO-DA	Shi, Sheng-Cai	1-EP-EA, 2-EP-SDP
Savoldi, Laura	1-LP-FM, 1-LO-FL	Shi, Yi	1-MP-CC1, 2-LP-FCT, 2-LP-MR, 2-MP-FP3, 3-LO HH
Saxby, Claire	2-MP-NB	Shi, Yigong	2-MP-NB
Schaapman, Kars	2-EP-DE2	Shi, Yunhua	1-MO-BK1, 3-MO-CU, 1-MP-EP, 1-MO-MP, 1-MP-CU, 2-LP-RF, 2-MP-BK2, 3-LP-HM
Scheiner, Marius	1-EO-AJ	Shi, Zhengjun	2-LO-RM
Scheiter, Juliane	3-MO-BM	Shigemori, Atsushi	3-MP-MG, 3-LP-HC
Scherbakov, Vladimir	3-LP-BM	Shim, Jeong Hyun	2-LP-MR, 3-EP-SQ
Scheuerlein, Christian	1-LP-AM2, 1-LP-AM2, 1-MO-N3T, 1-MP-SPR	Shimada, Yusuke	1-MP-SPR
Schindler, Lieze	2-EP-DE2	Shimakage, Hisashi	2-EP-SDP
Schirrmeister, Peter	1-MP-CU, 3-LO-TG	Shimizu, Kazuki	1-MP-FP2
Schlachter, Sonja I.	1-LP-PC, 2-LO-EA	Shimoyama, Jun-ichi	3-MO-BM, 3-MO-FW
Schlenga, Klaus	1-MO-SCC, 2-MO-CP, 2-MP-CC2	Shimoyashiki, Fumiya	2-MP-BK2
Schmid, Alexander	2-EP-SDP	Shin, Iksang	2-MP-NB
Schmidl, Frank	1-EP-JJ	Shin, Woosuck	3-MP-FP5
Schmidt, Daniel R.	2-EO-DA	Shintomi, Takakazu	3-LP-HC, 3-MP-MG
Schmidt, Ruediger	2-MP-NB	Shiotsu, Masahiro	2-LP-FCT, 2-LP-SMA
Schmidt, Thomas	2-LP-RF	Shirai, Yasuyuki	2-LP-FCT, 2-LP-MR, 2-LP-SMA
Schmitz, Jurriaan	1-LP-AM2	Shishido, Hiroaki	2-EO-DA
Schneider, Andre	3-EP-QQ	Shishov, Dmitry	2-LP-SMA
Schneider, Christian	2-LO-EA	Shishov, Ivan	2-LP-SMA
Schneider, Markus	1-MP-SPR	Shitov, Sergey	2-EO-DA
Schneider, Matthias	1-LP-FM	Shuptr, Mark	1-LP-AM2
Schneiderman, Justin F.	1-EO-AJ	Shutova, Daria	3-LP-BM
Schoellhorn, Claus	1-MO-SCC	Shyshkin, Oleg	1-MP-SPR
Schön, Yannick	1-EP-EA	Siddiqi, Irfan	4-EO-PL3
Schreiner, Fabian	3-LO-HH	Sidorova, Maria	1-EO-NW
Schubert, Jonathan	2-MP-NB	Sidrov, Gennady	3-MP-FP5
Schütz, Gisela	2-MP-FP3	Siegel, Michael	1-EO-NW, 2-EP-SDP
Sedlak, Kamil	1-LO-FL, 2-LO-FH, 3-LP-BM		
See, Patrick	1-EP-JJ		

Sieger, Max	1-MP-FP2, 1-MP-CU, 2-MO-FP1, 3-MP-CC3	Stammen, Joerg	1-LO-CA
Siemko, Andrzej	2-MP-NB	Starch, William L.	1-MO-N3T
Silae, Alexander	2-MP-NB	Starikovskii, Alexander	1-MP-EP, 3-LP-LE
Silva, Enrico	2-MO-FT, 2-MP-FP3, 3-MP-FP5, 2-MO-FP1, 3-MP-FM, 3-MO-FP4	Statra, Yazid	3-MP-MO1
Silva, Helder	1-LO-AM1	Stauffer, Theodore C.	1-MO-N3T
Silvestrini, Paolo	3-EO-SNQ	Steckert, Jens	1-LO-AM1
Simmendinger, Julian	2-MP-FP3	Stehli, Alexander	2-EO-QT, 3-EP-QQ
Simon, Charles	3-LO-HL	Stepanov, Boris	3-LP-BM, 2-LO-FH
Sin, Hyuk Yim	1-EP-EA	Stepien, Mariusz	2-LP-SMA
Singh, Shiv J.	3-MP-FM	Stetco, Elena	1-EP-EA
Sirois, Adam	2-EO-DE1	Stöger-Pollach, Michael	1-MO-N3T, 2-MP-NB
Sirois, Frédéric	1-LP-FCL, 1-LO-SFC, 1-LO-SFC, 2-MO-CP, 3-MO-FP4, 3-LO-HH	Stolyarov, Vasiliy	1-EP-JJ, 3-EO-TS
Skarba, Michal	2-LP-FCT, 3-MP-CC3	Strange, Daniel	3-LP-BM, 3-LO-HL
Skrotzki, Werner	2-MO-FT	Straubl, Severin	1-LP-PC, 2-LP-FCT
Skryabina, Olga	1-EP-JJ	Strickland, Nicholas	2-LO-OM
Slade, Robert	3-LP-NM, 3-MP-FP5, 2-LO-FH	Strømme, Maria	1-EO-AJ
Slater, Ben	1-EP-SP	Su, Yi-Feng	1-MO-BK1, 3-MP-FM
Smara, Anis	1-MO-MP, 1-MO-BK1, 2-LO-RM, 2-LP-SMA, 2-LP-CO	Suárez, Pilar	2-LP-FCT
Smirnov, Eugeny	2-EO-DA	Suarez-Villagran, Martha	2-MO-AP
Smith, Andrew	3-MP-MO1	Sublet, Alban	2-MP-FP3
Smith, Charles G.	1-EO-AJ	Sugane, Hideo	1-LP-PC
Smith, Robert	3-MP-MD	Sugiura, Toshihiko	3-LP-LE
Smolyaninov, Igor	3-MP-MD	Sugochi, Ryota	2-LP-SMA
Smolyaninova, Vera	3-MP-MD	Sumption, Michael	1-MO-N3T, 2-LP-MR, 2-MP-NB, 2-MO-AP, 3-MO-BM
So, Jooyeong	1-LP-FCL	Sun, Guozhu	2-EP-TMP
Sobolev, Alexandr	3-EO-FA	Sun, Hancong	3-EO-TM
Sojková, Michaela	3-MP-CC3	Sun, Liang	2-EP-TMP, 3-MP-FM
Sokolovsky, Vladimir	3-MP-MO1	Sun, Ning-Hui	2-EO-DE1, 2-EP-DE2
Soler, Laia	1-MP-CU, 2-MO-FP1, 3-MO-CU	Sun, Sicong	2-MO-AP
Soloviev, Igor	1-EP-JJ	Sun, X. Q.	1-EP-SP
Solovyov, Mykola	3-LP-NM	Sundaram, Aarthi	1-MP-FP2
Son, HyukChan	1-LP-PC	Sundqvist, Kyle	3-EO-TS
Song, Dongbin	2-MP-CC2	Surin, Mihail	3-LP-BM
Song, Dongjoon	3-MO-FP4	Surrey, Elizabeth	1-MO-MP, 1-LO-FL, 1-LP-FM, 2-MP-NB, 3-MP-MO1
Song, Jung-Bin	3-LO-HH	Susner, Michael	2-MP-FP3
Song, Meng	2-LO-RM	Suwa, Takahiro	3-MO-FW
Song, Naihao	1-LP-PC	Suzuki, Keisuke	3-MP-FP5
Song, Peng	2-LO-RM	Suzuki, Kenji	1-LP-PC
Song, Wenjuan	1-LP-FCL, 3-LP-NM	Suzuki, Takaaki	3-MO-BM, 2-LP-SMA
Song, Yuntao	1-LO-FL, 2-LO-FH, 3-LP-NM	Suzuki, Takumi	3-LP-NM
Sorel, Marc	1-EP-SP	Swetz, Daniel S.	2-EO-DA
Sotgiu, Giovanni	1-MP-FP2, 3-MP-FP5	Sylva, Giulia	2-MO-FT, 3-MO-FP4
Šouc, Ján	2-MO-CP, 2-LP-FCT, 3-LP-NM	Sysoev, Mikhail	1-MP-EP
Souto, Vinícius	2-MP-FP3	Sytnikov, Victor	1-LO-CA
Souza, Gisele	1-MP-CU	Szwangruber, Piotr	1-LP-AM2
Soyama, Kazuhiko	2-EO-DA		
Sparing, Maria	3-LP-LE		
Speller, Susannah	1-MO-BK1, 1-MP-BI, 1-MP-CC1, 2-MP-NB, 2-MP-BK2, 3-MP-FP5, 3-LP-BM		
Srpčić, Jan	1-MO-BK1, 1-MO-MP, 1-MP-CU	Taborelli, Mauro	2-LP-RF, 2-MO-AP
Stachon, Krzysztof	2-MP-NB	Tafuri, Francesco .	3-EP-QQ, 1-EP-JJ, 3-EO-TS, 2-EO-QT
Staines, Mike	3-LP-NM	Taino, Tohru	3-EP-SQ
		Taka, Chihiro	2-MP-FP3

## T

Takada, Suguru	2-LO-FH	Tixador, Pascal	1-LO-SFC, 1-LP-FCL, 2-LP-FCT, 3-LP-LE
Takahashi, Keita	1-MO-BK1	Tkachenko, Leonid	1-LP-AM2
Takahashi, Koki	3-LP-NM	Toche, Francois	1-MO-N3T
Takahashi, Masato	2-EP-TMP	Tock, Jean Philippe	1-LP-AM2
Takahashi, Yuhei	2-MP-FP3	Todesco, Ezio	1-LO-AM1
Takahata, Kazuya	2-LO-FH, 2-LP-CO, 3-LP-HC	Tokunaga, Keisuke	2-LP-MR
Takano, Katsuoshi	3-MO-FW	Tokuta, Shinnosuke	1-MP-SPR
Takano, Yoshihiko	3-MP-MD	Tolpygo, Sergey	3-EO-FA
Takao, Tomoaki	3-LP-LE, 3-MP-MG	Tomellini, Massimo	1-MP-CU
Takashima, Hiroshi	1-MP-CC1	Tomioka, Akira	2-LP-FCT, 2-LP-SMA
Takata, Suguru	2-LP-CO	Tomita, Masaru	3-MP-MG, 3-LP-HC, 1-LP-PC
Takeda, Masanori	2-EP-TMP	Tomkow, Lukasz	1-MO-BK1, 1-MO-MP, 2-LP-CO, 2-LO-RM, 2-LP-SMA
Takeda, Yasuaki	3-MO-BM	Tommasini, Davide	1-MO-N3T
Takeshita, Nao	3-MO-FW	Tomsic, Michael	1-MO-N3T, 2-LP-MR, 3-MO-BM
Takeshita, Yuto	3-EP-SQ	Tonooka, Kazuhiko	1-MP-CC1
Takeuchi, Naoki	2-EO-DE1	Torikachvili, Milton	3-EO-TS
Takewu, Hiroyuki	3-LP-HC	Torokhtii, Kostiantyn	2-MP-FP3, 2-MO-FT, 3-MO-FP4, 2-MO-FP1, 3-MP-FP5
Taki, Kazuya	2-LP-MR	Torsello, Daniele	2-MO-FT, 2-EP-SDP, 3-MO-FP4, 3-MP-MG
Tamegai, Tsuyoshi	2-MO-FT, 3-MO-FW	Tousignant, Bryan	1-LP-AM2
Tamura, Hitoshi	1-LP-FM	Trabaldo, Edoardo	3-EO-SNQ
Tan, Yunfei	2-LP-CO, 3-LP-HM, 3-LO-HH	Trastoy, Juan	1-EO-AJ
Tanabe, Hajime	2-LP-MR	Traverso, Andrea	3-MO-BM
Tanabe, Keiichi	3-EP-SQ, 3-MP-FM	Trillaud, Frederic	3-LO-TG, 3-LP-NM
Tanaka, Hideki	3-MO-BM, 2-LP-SMA	Trociewitz, Ulf P.	1-MP-BI, 3-LO-HH, 3-MO-BM
Tanaka, Masamitsu	1-EP-EA, 3-EP-SQ	Tronza, Vladimir	1-LP-FM
Tanaka, Saburo	2-EP-SDP, 3-EP-SQ	Tropeano, Matteo	3-MP-MG, 3-LP-LE
Tanaka, Shunkichi	2-EP-SDP	Troshyn, Oleksiy	2-MP-CC2
Tanaka, Teruya	1-LP-FM	Truccato, Marco	3-MP-MG
Tanatar, Makariy A.	2-MO-FT	Tsapleva, Anastasiia	2-MP-NB, 3-MP-MG
Tanazawa, Masayuki	1-LP-PC, 1-LO-CA	Tsolakis, Efstratios	1-LP-AM2
Tang, Guang-Ming	2-EO-DE1, 2-EP-DE2	Tsuchiya, Go	3-MP-FM, 3-MP-FP5
Tang, Xin	1-EP-JJ	Tsuchiya, Yoshinori	3-MP-FM
Tang, Zhi-Min	2-EP-DE2	Tsuchiya, Yuji	2-MO-CP, 3-MP-FP5, 3-MP-CC3
Taniguchi, Hiroyasu	2-MP-NB	Tsuda, Makoto	3-MP-MG, 3-LP-HC
Tao, Quan	3-EP-SQ	Tsui, Yeekin	1-MP-EP, 3-LP-BM, 3-LP-HM
Tarantini, Chiara	2-MO-FT, 2-MP-NB, 3-MP-FM, 1-MO-BK1, 2-MP-NB, 1-MO-N3T	Tsuji, Yasunari	1-EP-EA
Tatsuta, Takahiro	3-LP-HC	Tsujimoto, Manabu	1-EP-JJ
Taylor, Gregor	1-EP-SP	Tsukada, Kenichi	3-LP-HC, 3-MP-MG
Taylor, Richard	2-LO-RM	Tsukamoto, Akira	3-EP-SQ
Teah, John	2-LO-FH	Tsurudome, Takehisa	2-LP-MR
ten Kate, Herman H J	1-LO-AM1, 2-LO-FH, 3-LP-NM	Tsuruta, Akihiro	3-MP-FP5
Teng, Yuping	1-LP-PC	Tsutsui, Hiroshi	2-LP-MR
Terai, Hirotaka	1-EP-EA, 1-EO-NW, 1-EP-SP, 2-EP-SDP	Tsuzuki, Keita	2-LP-SMA
Terao, Naho	2-MP-CC2	Tu, Jinkun	3-MP-MO1
Terao, Yutaka	2-LP-SMA	Tu, Xuecou	1-EP-SP
Thayne, Iain G.	3-EO-TM	Tuckerman, David	3-MP-MD
Thoens, David	3-EO-TM	Turner, Daniel	1-MP-SPR
Thomas, Adrian	2-MP-NB	Turtù, Simonetta	1-LO-FL, 3-LP-LE
Thomas, Jeremy	2-EP-TMP	Twin, Andrew	3-LP-HM, 3-LO-HL, 3-LP-BM
Tian, Bo	1-LP-PC, 3-LP-LE	Tzalenchuk, Alexander	2-EO-QT
Tian, Chao	3-LO-HH, 2-MP-FP3		
Tian, Wanghao	3-EO-TM		
Tian, Zhengjian	2-MP-CC2, 1-MP-FP2		
Tikkonen, Jussi	1-MP-CC1, 3-MP-CC3		
Tippett, Sam	1-LP-FM, 1-LO-FL		

**U**

- Uchino, Keisuke 3-LP-LE  
 Ueda, Hiroshi 2-LP-MR, 3-LP-HC  
 Uemura, Toshiki 3-MP-FM  
 Uglietti, Davide 1-LP-FM, 2-LO-FH  
 Uhrig, David 2-MP-FP3, 3-MP-FM  
 Ullom, Joel N. 2-EO-DA, 2-EO-DA  
 Ulysse, Christian 1-EP-JJ, 1-EO-AJ  
 Umeda, Masaki 3-MP-MD  
 Umeno, Takahiro 2-LP-SMA  
 Ummarino, Giovanni A. 2-MO-FT  
 Unterrainer, Raphael 3-MO-FP4, 3-MP-FP5  
 Usoskin, Alexander 1-LO-AM1, 1-MO-SCC, 1-MO-CS,  
     2-MP-CC2, 2-MO-CP  
 Ustinov, Alexey V. 1-EP-EA, 2-EO-DA,  
     2-EO-QT, 3-EP-QQ  
 Uzawa, Yoshinori 2-EP-SDP

**V**

- Vaglio, Ruggero 2-LP-RF, 3-MO-CU  
 Vajda, Istvan 1-LP-FCL  
 Vale, Leila R. 2-EO-DA  
 Valente-Feliciano,  
     Anne-Marie 3-LO-CA  
 Valentino, Massimo 3-EO-SNQ  
 Valikov, Roman 2-MO-CP  
 Valiyaparambil Abdulsalam,  
     Anvar 3-LP-HC  
 Valizadeh, Reza 2-MP-FP3  
 Vallabhapurapu, Srinivasu 2-LP-RF  
 Valtchev, Stanimir 2-LP-FCT  
 van der Beek, Kees 2-MP-FP3  
 van der Laan, Danko 1-LO-AM1, 2-LO-FH  
 Van Driessche, Isabel 1-MP-FP2, 1-MP-CU, 2-MO-FP1  
 van Hasselt, Peter 2-LO-RM  
 van Nugteren, Bas 2-LP-FH, 3-LP-NM  
 van Nugteren, Jeroen 1-LO-AM1, 1-LP-AM2, 3-LP-NM,  
     3-LP-BM  
 Van Tendeloo, Gustaf 2-MO-FP1  
 Vanderbemden, Philippe 1-MP-SPR, 2-LO-OM  
 Vanderheyden, Benoît 1-MP-CC1, 2-LO-OM, 3-MP-MO1  
 Vannozzi, Angelo 1-MP-CU, 1-MP-FP2, 1-MP-SPR,  
     2-MO-FP1, 3-MP-FP5, 3-MP-FM  
 Varsano, Francesca 3-MP-FM  
 Vasilevski, William 3-EP-SQ  
 Venter, Bernard 1-EP-JJ  
 Ventim-Neves, Mário 2-LP-FCT  
 Venuturumilli, Sriharsha 1-LP-PC, 1-MP-SPR, 2-LO-EA,  
     3-LP-LE  
 Vertelis, Vilius 1-MP-SPR  
 Verweij, Arian 1-LO-FL, 1-LO-AM1, 1-LP-FM, 1-LP-  
     AM2, 2-MP-NB

- Vettoliere, Antonio 3-EO-SNQ  
 Vialle, Julien 3-LP-LE  
 Vidiš, Marek 1-MP-SPR  
 Viererbl, Ladislav 1-MP-CU  
 Vignati, Marco 2-EP-SDP  
 Vignolo, Maurizio 3-MP-MG, 3-MO-BM  
 Vizirichenko, Roman 3-LO-HL, 3-LP-BM  
 Vlad, Valentina Roxana 1-LO-SFC, 1-MP-CC1, 3-MO-FP4  
 Vlasko-Vlasov, Vitalii 3-MP-FM  
 Vodolazov, Denis 2-EO-DA  
 Vogel, Michael 2-MP-FP3  
 Vojenciak, Michal 2-LO-EA, 2-LP-FCT, 2-MO-CP,  
     2-LP-SMA, 3-MP-FP5, 3-MP-CC3  
 Volkov, Serhii 3-MP-MD  
 Voss, Jan Nicolas 1-EP-EA  
 Vu, The Dang 2-EO-DA  
 Vyatkin, Vladimir 1-MP-FP2  
 Vysotsky, Vitaly 3-LP-HC, 1-LO-CA

**W**

- Wada, Tamon 1-MP-CU  
 Walker, Benjamin 2-MP-NB, 1-MO-N3T  
 Wan, Yuanxi 3-LP-NM  
 Wang, Bangzhu 1-LO-SFC  
 Wang, Dongquan 1-LP-FM  
 Wang, Fangzhou 2-EP-DE2  
 Wang, Haonan 2-LP-FCT  
 Wang, Heping 1-EP-SP  
 Wang, Hongdi 3-LO-TG  
 Wang, Huabing 2-EP-SDP, 3-EO-TM  
 Wang, Hubing 1-MP-SPR, 2-EP-SDP  
 Wang, Huiwu 1-EP-JJ  
 Wang, Jia 2-EP-TMP, 3-MP-FM  
 Wang, Jianhua 1-LO-SFC, 2-LP-CO, 3-MP-MO1  
 Wang, Jin-Feng 1-EP-EA  
 Wang, Lei 2-LP-MR, 3-LO-HL, 3-LP-HM,  
     3-LP-NM  
 Wang, Libin 3-EO-FA  
 Wang, Mingjiang 2-MP-CC2, 1-MP-FP2, 3-LO-TG  
 Wang, Mingyang 2-LP-COG  
 Wang, Qingyang 3-MP-MG  
 Wang, Quliang 2-LP-MR, 3-LO-HL, 3-LP-HM  
 Wang, Ruilong 2-MP-NB  
 Wang, Shudan 3-MP-CC3  
 Wang, Wei 2-LP-SMA  
 Wang, Wentao 1-MP-FP2, 2-MP-CC2  
 Wang, Xiaorong 1-LO-AM1  
 Wang, Xingzhe 3-LP-NM, 3-MP-CC3  
 Wang, Xu 2-EP-TMP  
 Wang, Xudong 1-LP-AM2  
 Wang, Yanzhi 2-EO-DE1  
 Wang, Yaohui 3-LO-HL, 3-LP-HM, 2-LP-MR  
 Wang, Yawei 3-LP-HC, 2-LO-EA, 3-LP-NM  
 Wang, Yong 1-EO-NW

Wang, Yongliang	3-EP-SQ	Wosik, Jarek	2-MO-AP
Wang, Z.	1-EP-SP	Wotherspoon, Richard	3-LP-HM
Wang, Zeng	3-EO-SNQ	Wu, Beimin	2-LO-RM, 3-LP-HM
Wang, Zhao liang	1-LP-FM	Wu, Bo	2-MP-NB
Wang, Zhen	1-EP-JJ, 1-EO-NW, 1-EP-SP, 1-MP-SPR, 2-EP-SDP, 2-EP-DE2, 3-EP-SQ	Wu, Fan	1-LP-FM
Wang, Zheng	1-EP-EA, 2-EP-SDP	Wu, Haowei	1-MP-EP
Warburton, Paul	3-EO-SNQ, 3-EP-QQ, 3-EO-FA	Wu, Judy	2-MO-FP1
Warren, David	3-LP-HM, 3-LO-HL	Wu, Jun	3-EP-SQ
Watanabe, Keisuke	3-EP-SQ	Wu, Kaihong	2-MP-NB, 2-LP-MR
Watanabe, Michihiko	1-LO-CA, 1-LP-PC	Wu, Pei-Heng	1-EP-SP, 2-EP-DE2, 2-EP-SDP, 3-EO-TM
Watanabe, Norimichi	1-EP-JJ, 3-EP-SQ	Wu, Qihong	2-LO-RM
Watanabe, Tomonori	2-LP-MR, 3-LP-HC, 3-LP-LE	Wu, Qiwen	3-LP-NM
Watasaki, Masahiro	2-MP-BK2	Wu, W	1-MO-SCC
Webb, Roger	3-MP-FP5	Wu, Wei	1-LP-AM2
Weber, Phillip	2-LO-EA	Wu, Wentao	1-MP-SPR, 2-EP-SDP
Wei, Ziqiang	1-LO-SFC	Wu, Yu	1-EP-JJ, 2-LP-MR, 2-MP-NB, 2-EP- DE2, 2-LP-FCT
Weides, Martin	2-EO-QT, 2-EP-TMP, 3-EP-QQ	Wu, Yue	3-LP-HC
Weil, Marcel	1-MP-CCI	Wu, Yun	2-EP-TMP, 3-MP-FM
Weiss, Jeremy	1-LO-AM1, 2-LO-FH	Wuensch, Stefan	2-EP-SDP
Weiss, Klaus-Peter	1-LO-CA	Wulff, Anders C.	1-MO-CS
Welp, Ulrich	3-MP-FM		
Wen, Fangjing	2-LO-EA		
Wen, Xinghao	1-LP-FM		
Wen, Yuyan	3-LO-TG		
Weng, Fangjing	2-LO-EA, 3-LO-TG		
Wenstrom, John	1-LP-AM2	Xi, Xiaoxing	1-EP-JJ
Wenzel, Malte	3-EP-SQ	Xia, Lian	2-MP-NB
Wéra, Laurent	2-LO-OM	Xiang, Bin	1-LO-SFC, 2-LP-CO, 3-MP-M01
Werfel, Frank	1-MP-CU, 3-LO-TG	Xiao, Leishi	1-LO-SFC
Werrell, Jessica	3-MP-MD	Xiao, Liye	1-LP-PC
Wesche, Rainer	1-LP-FM, 1-LO-FL, 2-LO-FH	Xiao, Yang	2-LP-SMA
Wheatley, Laura	1-MO-BK1, 2-MP-BK2	Xiaolin, Wang	3-MP-FM
Wikkerink, Djurre	2-LP-MR	Xie, Minshu	1-EO-AJ
Wildermuth, Micha	1-EP-EA	Xie, Ruiguang	2-LP-SMA
Will, Andreas	2-MP-NB	Xie, X. M.	1-EP-SP
Willering, Gerard	1-LO-AM1	Xie, Yunzhi	2-LP-CO
Williams, Grant V M	2-MP-FP3, 3-MP-FM	Xin, Canjie	3-LP-HM
Williams, Jonathan M	1-EP-JJ, 2-EP-DE2	Xin, Ying	1-LP-PC, 1-LO-SFC, 2-MP-CC2, 3-LO-TG
Williams, Oliver	3-MP-MD	Xioong, Xiaomei	3-MP-MG
Wilson, Karl	3-EP-SQ	Xu, Aihua	1-LP-FM, 2-LP-MR
Wilson, Martin	3-LP-NM	Xu, G. Z.	1-EP-SP
Wimbush, Stuart	1-MO-MP, 2-LO-OM	Xu, Mengxin	1-LP-AM2
Winkler, Dag	3-EO-SNQ, 1-EO-AJ	Xu, Qingjin	1-LP-AM2
Winkler, Tiemo	2-LO-RM	Xu, Ting	1-LP-AM2
Wojtasiewicz, Grzegorz	2-LP-FCT	Xu, Wanning	1-EP-JJ
Wojtyniak, Brygida	1-MO-SCC	Xu, Weiwei	2-EP-TMP, 2-EP-SDP
Wolf, Michael J.	1-LO-CA	Xu, Xingchen	1-MO-N3T, 2-MP-NB
Wolfstdér, Simon	2-LO-EA, 3-LO-TG	Xu, Ying	3-LP-BM
Wolfus, Shuki	3-LP-LE	Xu, Zuyu	3-EO-TM
Wollmann, Daniel	2-MP-NB	Xuan, Wei	2-EP-DE2
Walz, Tim	2-EO-QT, 3-EP-QQ		
Won, DuYean	1-LP-PC		
Wood, Ken	3-EO-TM		
Woodfield, Brian	3-MP-MD		
Wort, Chris	2-MP-BK2		

**Y**

- Yablokov, Anton 3-EO-FA  
 Yabuno, Masahiro 1-EO-NW  
 Yagai, Tsuyoshi 3-LP-HC, 3-MP-MG  
 Yamada, Y 1-MO-SCC  
 Yamada, Yasuji 2-MP-CC2  
 Yamada, Yoshihiro 1-MP-CU  
 Yamae, Taiki 2-EP-DE2  
 Yamaguchi, Hirohito 1-LP-PC, 1-LO-CA  
 Yamaguchi, Satarou 1-MP-SPR  
 Yamamoto, Akiyusu 1-MO-MP, 1-MP-SPR, 3-MP-FM,  
     3-MO-BM  
 Yamamoto, Haruumi 3-MP-FP5  
 Yamamoto, Kaoru 2-LP-SMA  
 Yamonaka, Kengo 3-MO-BM  
 Yamanashi, Yuki 2-EP-DE2  
 Yamano, Satoshi 1-MP-FP2  
 Yamashita, Taro 1-EP-EA, 3-EP-SQ  
 Yamen, Al-Mahmoud 1-LP-AM2  
 Yan, Guo 2-MP-NB  
 Yan, Kaijuan 2-MP-NB  
 Yan, Xufeng 3-LP-BM  
 Yan, Yufan 3-LP-HM  
 Yanabu, Satoru 1-LO-SFC, 2-LP-CO  
 Yanagi, Nagato 1-LP-FM, 2-LP-CO, 2-LO-FH  
 Yanagi, Yosuke 3-LP-BM  
 Yanagisawa, Keiichi 3-MO-FW  
 Yanagisawa, Yoshinori 2-LP-MR  
 Yanai, Sota 2-LP-FCT  
 Yañez, Ramon 1-MP-FP2, 2-MO-FP1  
 Yang, Benkang 1-LP-PC, 1-LP-FCL  
 Yang, Chao 1-LO-SFC, 2-EO-QT  
 Yang, Dongsheng 1-MP-BI  
 Yang, Fang 3-MP-MG  
 Yang, Gansong 1-MP-FP2, 2-MP-CC2  
 Yang, Hyeongseok 1-LO-CA  
 Yang, Hyung Suk 1-LP-PC  
 Yang, Jiabin 2-LP-FCT  
 Yang, Jia-Hong 2-EP-DE2, 2-EO-DE1  
 Yang, Linke 2-LP-SMA  
 Yang, Ping 2-EO-QT  
 Yang, Sung Chae 3-MP-CC3  
 Yang, Tianhui 1-LP-PC  
 Yang, Wenjiang 2-MP-CC2, 3-LP-LE  
 Yang, Wenjie 1-LP-AM2  
 Yang, Xiaoyan 1-EP-SP-S16  
 Yang, Xinsheng 1-MP-EP, 2-LO-FH  
 Yang, Xue 1-MP-FP2, 2-MP-CC2  
 Yang, Ye 2-LO-RM  
 Yang, Yifeng 1-LP-AM2, 1-MP-CCI, 2-LO-OM,  
     3-LP-HC  
 Yang, Zhisheng 2-LP-FCT  
 Yao, Chao 1-MO-MP, 3-MP-FM  
 Yao, Min 1-LP-PC, 2-LP-SMA, 2-MP-CC2  
 Yao, Ming 2-EP-SDP

- Yao, Ni 1-EP-SP  
 Yao, Xin 1-MP-CU  
 Yasunaga, Shinya 1-MP-FP2  
 Yates, Stephen 3-EO-TM  
 Ye, Mao 3-LP-LE  
 Ye, Xiao-Chun 2-EO-DE1, 2-EP-DE2  
 Yelamanchili, Bhargav 3-MP-MD  
 Yeshurun, Yosef 3-LP-LE  
 Yilmaz, Ugur 3-EP-SQ  
 Yim, Hyuk Sin 1-EP-EA  
 Ying, Liliang 1-EP-JJ, 2-EP-DE2, 3-EP-SQ  
 Yokoe, Daisaku 1-MP-FP2, 2-MP-CC2  
 Yokoyama, Hiroki 3-LP-NM  
 Yokoyama, Kazuya 1-MP-CU, 3-LP-BM, 3-MO-BM  
 Yokoyama, Shoichi 2-LP-MR  
 Yonekawa, Hirofumi 1-LP-FM  
 Yong, Huadong 1-MP-EP, 2-MP-BK2, 3-LP-HM  
 Yong, Xinsheng 2-MP-NB  
 Yoo, Jaeun 1-LP-PC  
 Yoon, Dukjae 2-MP-NB  
 Yoon, Gi Yeong 3-MP-MG  
 Yoshida, Jun 2-LP-MR  
 Yoshida, Koichi 2-LP-SMA  
 Yoshida, Ryuuji 1-MP-FP2  
 Yoshida, Takashi 2-LP-SMA  
 Yoshida, Yoshiyuki 1-MP-CCI, 3-MP-FM, 3-EO-TM  
 Yoshida, Yutaka 2-MO-CP, 3-MP-FP5, 3-MP-CC3  
 Yoshihara, Yuka 2-LP-MR  
 Yoshikawa, Nobuyuki 2-EO-DE1  
 You, L. X. 1-EP-SP  
 You, Lixing 1-EO-NW  
 Young, Edward 1-MP-CCI, 2-LO-OM  
 Yu, In Keun 1-LP-PC  
 Yu, In-Keun 1-LP-FCL  
 Yu, Jinbo 3-LP-LE  
 Yu, Kwon Kyu 3-EP-SQ  
 Yu, Long 3-LP-LE  
 Yu, Mei 2-EP-SDP  
 Yu, Mengmeng 3-EP-SQ  
 Yu, Pei-Shi 2-EP-DE2  
 Yu, Ting 3-MP-MO1  
 Yu, Wu 1-LP-FM  
 Yu, Zhou 2-MP-NB  
 Yuan, Pusheng 2-MP-FP3  
 Yuan, Weijia 1-LP-PC, 1-MP-SPR, 1-LP-FCL,  
     2-LO-EA, 3-MP-MO1, 3-LP-BM,  
     3-LP-HC, 3-LP-LE, 3-LP-NM,  
     3-LO-TG  
 Yuki, Kohei 1-LO-SFC  
 Yun, Sang-Yun 1-LP-FCL

**Z**

- Zadorosny, Rafael 1-MP-CU, 1-MP-SPR, 2-MP-FP3  
 Zaleski, Andrzej 3-MP-FM, 3-MP-MG

Zampa, Alexandre	1-LO-SFC, 2-LP-FCT	Zhang, Xingyu	1-EP-SP
Zanegin, Sergey	1-LO-CA, 2-LP-SMA, 3-LP-HC	Zhang, Xintao	2-LP-FCT, 3-LO-HH
Zanin, Danilo Andrea	2-MO-AP	Zhang, Xue	1-EP-JJ, 3-EP-SQ
Zanino, Roberto	1-LP-FM, 1-LO-FL	Zhang, Xueqiang	2-EP-TMP, 3-MP-FM
Zanotto, Luca	2-LP-RF	Zhang, Yan	3-MP-MG
Zappatore, Andrea	1-LP-FM, 1-LO-FL	Zhang, Yifei	1-MP-FP2
Zapretilina, Elena	3-LP-HC	Zhang, Yong	2-MP-NB
Zardán Gómez de la Torre, Teresa	1-EO-AJ	Zhang, Yongliang	2-LP-MR, 2-MP-NB
Zechihin, Boris	2-LP-SMA	Zhang, Yuan	2-MO-AP
Zeldov, Eli	3-EO-SNQ	Zhang, Zhengshuo	1-MP-EP
Zen, Nobuyuki	1-EP-EA	Zhang, Zhenyu	3-LP-HC
Zeng, Junwen	1-EP-JJ	Zhang, Zhifeng	1-LP-FCL, 1-LP-PC, 2-LP-FCT
Zeng, Xian Lin	2-MP-FP3	Zhang, Zhi-Min	2-EP-DE2, 2-EO-DE1
Zeng, Xianwu	1-LP-FCL	Zhang, Z-W	1-MO-SCC
Zeng, Zhidun	3-LP-LE	Zhao, Chaoqun	3-LO-TG
Zerméio, Victor	3-LP-NM	Zhao, Qingyuan	2-EP-DE2
Zernov, Sergey	2-MP-NB	Zhao, Xin	2-LP-FCT
Zgirski, Maciej	2-EO-DA	Zhao, Yong	1-MP-FP2, 2-MP-CC2, 2-MP-NB
Zha, Haipeng	2-EP-DE2	Zhao, Yue	1-MP-CC1, 1-MO-SCC, 3-MP-CC3, 2-MP-CC2
Zhai, Yuhu	1-LP-FM	Zheltov, Vladimir	1-LP-PC
Zhang, Biao	1-EP-SP	Zheng, Dongning	2-EO-QT
Zhang, Bo	2-EP-DE2	Zheng, Jinxing	1-LO-FL, 1-LP-FM, 1-MP-EP, 3-LP-BM, 3-LP-NM
Zhang, Chengjun	1-EP-SP	Zheng, Jun	3-LP-LE, 3-LO-TG
Zhang, Cui-Cui	2-EP-DE2	Zheng, Kai	1-EP-SP, 2-EP-DE2
Zhang, Dong	1-LP-FCL, 1-LP-PC	Zheng, Shanliang	1-LO-FL, 1-LP-FM
Zhang, Guofeng	3-EP-SQ	Zheng, Xiang-Yu	2-EP-DE2
Zhang, Guomin	1-LP-FCL, 1-LP-PC, 2-LP-CO, 2-LP-FCT	Zhong, JiaQiang	1-EP-EA, 2-EP-SDP
Zhang, Heng	1-LO-FL, 1-LP-FM	Zhou, Chao	2-LO-FH, 2-LP-MR, 3-MP-CC3
Zhang, Hongye	2-MP-CC2, 1-LP-PC, 2-LP-SMA	Zhou, Difan	3-LP-BM, 1-MO-BK1, 1-MO-MP, 2-MP-BK2
Zhang, Huili	3-EO-TM	Zhou, Hui	1-EP-SP
Zhang, Huiming	2-MP-CC2	Zhou, Xianjing	3-EO-TM
Zhang, Jianghua	3-LP-LE	Zhou, Yan	2-EP-DE2
Zhang, Jing	3-LP-BM	Zhou, Yong	2-LP-SMA
Zhang, Jingye	1-LP-PC	Zhou, Youhe	1-MP-EP, 2-MP-BK2, 3-LP-HM, 3-LP-NM
Zhang, Kai	2-LP-RF	Zhu, Di	1-EP-SP
Zhang, Kailin	2-MP-NB	Zhu, J.	2-MP-CC2
Zhang, Ke	2-MP-NB	Zhu, Jiahui	2-MP-CC2, 1-LP-FCL
Zhang, KuoZhong	2-EP-DE2	Zhu, Jianmin	1-MP-CC1, 3-MP-CC3
Zhang, LaBao	2-EP-DE2	Zhu, J-M	1-MO-SCC
Zhang, Lu	1-EP-JJ	Zhu, Yanmin	2-MP-NB
Zhang, Luming	2-LO-RM	Zhu, Zixuan	3-LP-LE, 3-LP-HC
Zhang, Min	1-LP-PC, 1-MP-SPR, 2-LO-EA, 3-LP-HC, 3-LP-BM, 3-LP-LE, 3-LP-NM, 3-MP-MO1, 3-LO-TG	Zhuravlev, Sergey	2-LO-RM
Zhang, Ning-Hui	2-EP-DE2	Zhyllukhina, Olena	3-EP-QQ
Zhang, Pingxiang	2-MP-NB	Ziegele, Marc	3-EO-TM
Zhang, Qingbo	1-MP-CC1, 2-LO-OM	Ziqing, Zhu	3-MP-MD
Zhang, Qiyu	1-EP-JJ	Zoboli, Lorenzo	1-LO-FL
Zhang, Shuling	3-EP-SQ	Zollitsch, Christoph W	3-EO-SNQ
Zhang, Teng	1-LO-SFC	Zorin, Alexander	2-EP-TMP, 3-EO-TM
Zhang, Wei	2-MP-FP3	Zou, Shengnan	3-LP-NM
Zhang, Weijun	1-EP-SP, 1-EO-NW	Zou, Simin	3-MP-MD
Zhang, Wen	1-EP-EA, 2-EP-SDP	Zubko, Vasily	1-LO-CA, 2-LP-SMA, 3-LP-HC
Zhang, Xin	2-EP-DE2		
Zhang, Xingyi	1-MO-CS		

## NOTES























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Contacts: Vitaly Vysotsky: [vysotsky@ieee.org](mailto:vysotsky@ieee.org)

Konstantin Kovalev: [kaf310mai@gmail.com](mailto:kaf310mai@gmail.com)

Grigory Goltzman: [goltzman@mspu-phys.ru](mailto:goltzman@mspu-phys.ru)

